

Pammasani

NUTRITIONAL FEEDING IN THE FOURTH PLAN



EDITED BY
T. S. AVINASHILINGAM

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Nutritional Feeding in the Fourth Plan

EDITED BY

T. S. AVINASHILINGAM

(From the Proceedings of the National Seminar on
Nutritional Feeding held in Sri Avinashilingam Home Science
College, Coimbatore-11 from February 24 to 25, 1970.)

GOVERNMENT OF TAMIL NADU.

GORDON CARTER
DIRECTOR

UNITED NATIONS CHILDREN'S FUND

SOUTH CENTRAL ASIA REGION
UNICEF HOUSE, 11 JOR BAGH
NEW DELHI-3 INDIA

FOREWORD

If one had to point to - and indeed it is our duty to point to these things in an insistent manner - the foremost needs of the young child in much of India today, they are more nutritious food, clean water and simple health care. Other needs crowd these it is true, but in my mind these come first.

That is why the Seminar has a special meaning and has taken a special responsibility. May those who participated pursue energetically and with vision the front-line measures which will help to erase malnutrition amongst children, so poignantly referred to as India's greatest sorrow.

(Sd). Gordon Carter
Director.

P. U. SHANMUGAM

Minister for Food and
Local Administration.

Fort St. George,
Madras-9.

FOREWORD

I have great pleasure in congratulating Sri. Avinashilingam Home Science College, Coimbatore for bringing out this Book on the Proceedings of the Seminar on "Nutritional Feeding in the Fourth Plan." I trust that the Book will prove an effective weapon in the hands of those, who are fighting malnutrition among the masses and help the emergence of a socially and economically developed population in our State. I wish the publication all success.

(sd) P. U. Shanmugam

16-12-'70

ACKNOWLEDGEMENT

We are very grateful to:

Sri. B. Venkatappiah Member - (Agriculture) - Planning Commission for his guidance, participation, and for inaugurating the Seminar.

Sri N. D. Sundaravadivelu, M. A., L. T., Vice Chancellor of the University of Madras and Dr. C. Gopalan, Director, National Institute of Nutrition Hyderabad for their keynote addresses.

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Dr. M. Swaminathan, Central Food Technological Research Institute, for his suggestions.

Dr. K. Kulandaivel, Principal, Teacher's College, Sri Ramakrishna Mission Vidyalaya. Smt. S. Jayakaran, CASA; Selvi Shanti Sudarsanam, Project Nutrition Officer, Tamil Nadu; Thiru Samuel Adik, Special Officer, Midday Meals Programme, Directorate of School Education, Tamil Nadu; and Dr. Krishnamurthi Rao Assistant Director of Nutrition, Tamil Nadu for their participation and papers.

The Government of Maharashtra for deputing Dr. S. S. Pore and Government of Uttar Pradesh for deputing Miss C. Govind.

Sri Randhir Singh Chowdhari, Panchayat and Development Department Government of Rajasthan; Director of Public Instruction, Haryana; C. R. Bhattacharji, Deputy Secretary, Government of West Bengal; Government of Kerala, Government of Madhya Pradesh, and Tripura for their papers.

Sri J. S. Bhango, I. A .S. Collector of Coimbatore District for his enthusiastic participation.

The BDO. Extension Officer in Education, Mukyasevika, the Headmasters and parents of Perianaickenpalayam Block presentation.

Smt. Godavari Kamalanathan, Vice Principal, Dr. Usha Chandrasekhar Professor and Mrs. B. Sharadambal, Lecturer of Sri Avinashilingam Home Science College for their help.

Dr. Rajammal P. Devadas (Principal) for her assistance in conducting this seminar and UNICEF for their involvement and assistance towards the ANP, and for this publication.

T. S. AVINASHILINGAM.

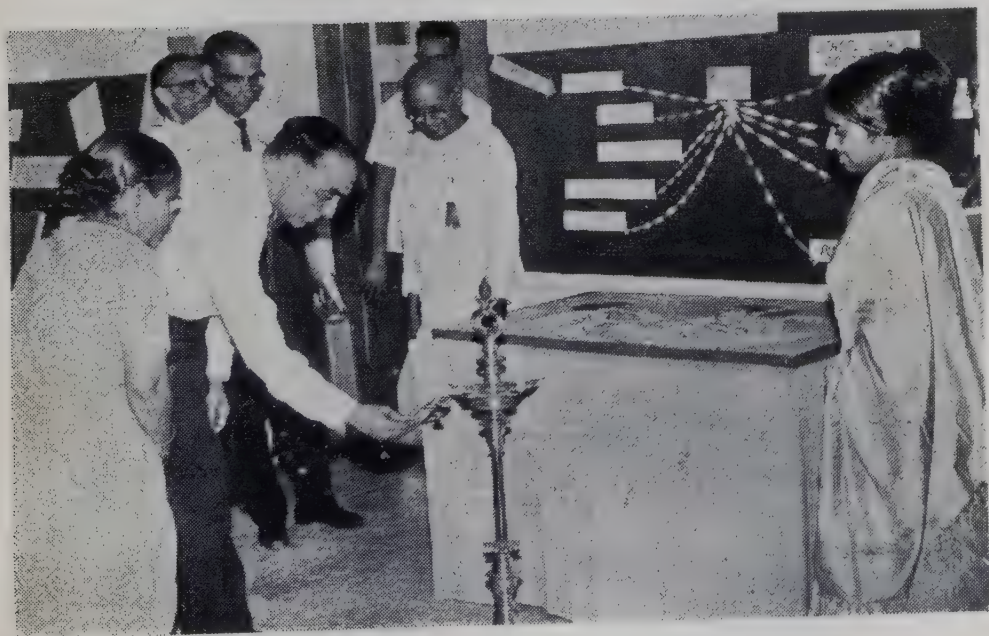
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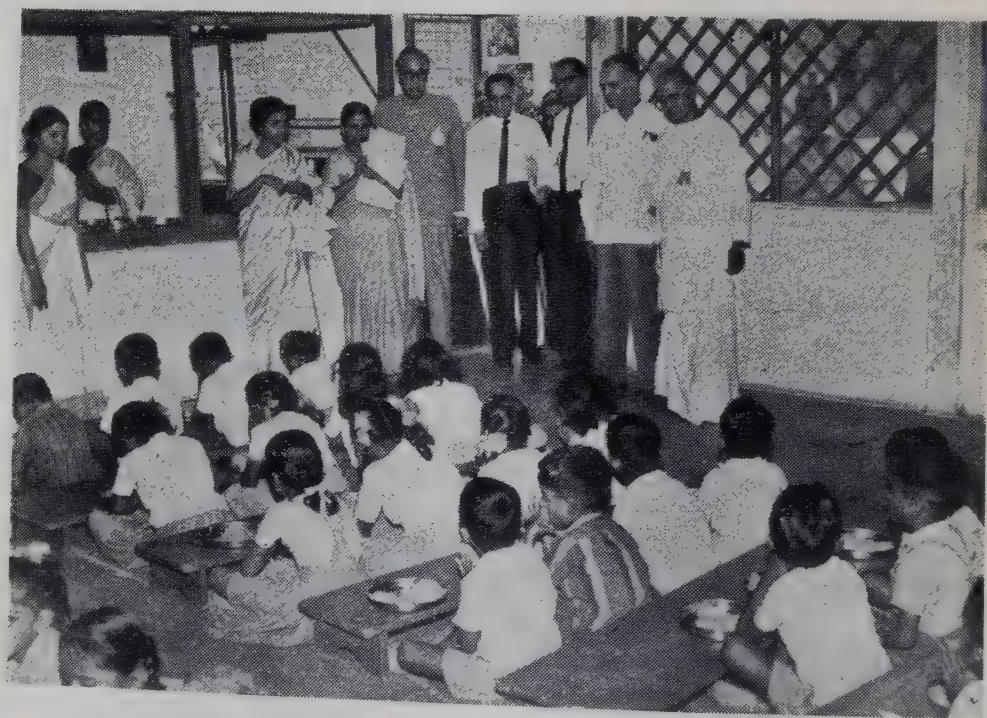
Inauguration of the Seminar by
 Sri B. Venkatappiah, Member, Planning Commission
 L-R. Dr. C. Gopalan, Dr. Rajammal P. Devadas
 Sri B. Venkatappiah, Sri T. S. Avinashilingam,
 Sri N. D. Sundaravadivelu.



Dr. C. Gopalan
 Opening the Seminar Exhibition.



One of the Sessions of the Seminar



Participants of the Seminar observing the Midday Meals Programme in Sri Avinashilingam Elementary School.

Chapter I

GENESIS OF THE SEMINAR-IT'S RECOMMENDATIONS

T. S. Avinashilingam

In view of the huge investments in the several feeding programmes operating in the country, coordination between the many agencies involved is of vital importance, if the country is to get the full benefit. There must be active co-ordination between the various departments in the central and state governments, and between the governments of the centre and the states. More important than these, there must be complete understanding, co-operation, enthusiasm and missionary zeal in the field, at the point of distribution and consumption, where the beneficiaries receive the nutritional help individually. An understanding of how the existing agencies operate their needs and problems and how they can be improved in terms of the ultimate realisation of their goals is necessary. With these objectives, the Avinashilingam Home Science College took the initiative to organise a National Seminar on the very important subject of "Nutritional Feeding in the Fourth Plan".

Background of Sri Avinashilingam Home Science College

The college has a rich background for this purpose being perhaps the biggest set up of its kind providing for a large under-graduate enrolment and six post-graduate (M. Sc.) Home Science courses, namely, Foods and Nutrition, Home Management, Child Development, Clothing and Textiles, Home Science Extension and Biochemistry. The College is also recognised for offering the Ph.D. in Nutrition and Child Development. In the same campus, there is a Teacher's College providing courses leading to the B. T. degree, a High School, a

Primary School and a Nursery School, thus providing in one campus, education from the nursery school to doctorate on the one side, and B. T. and Extension Services on the other.

The college has carried out considerable work in the various aspects of applied nutrition. The Government of Tamil Nadu have been pleased to start the Applied Nutrition Programme in the Perianaickenpalayam Block, and involve the collaboration of the College to help in the planning, executing and evaluation of ANP with nutrition education and research. Considerable research on various aspects of school feeding has also been carried out in the college, through lunch programme maintained in the primary school in the campus and in the surrounding villages. The college has evolved a balanced and nutritious school lunch within the 10 paise provided by the Midday Meal Scheme of Tamil Nadu in which the people's contribution amounts to 4 paise / meal/child, supplemented by the CARE gifts in the form of food commodities. These findings have been published in English by the Ministry of Education, Government of India, and in Tamil by the Government of Tamil Nadu to serve as a guide book for teachers, parents and local bodies running this programme.

The college is publishing the Indian Journal of Nutrition and Dietetics with the Principal, Dr. Rajammal P. Devadas as chief editor. The journal which is only of its kind in India is a bimonthly providing a forum for the publication of research done in the fields of nutrition, dietetics and biochemistry. The journal is being subscribed by hundreds of workers in the country and abroad and by nutrition laboratories all over the world.

Cooperation of the Planning Commission

In order to organise this National Seminar on Nutritional Feeding in the Fourth Plan, the Principal of our college, Dr. Rajammal P. Devadas approached Shri B. Venkatappiah, Member of the Planning Commission (Agriculture) who is dealing with Nutrition in the Planning Commission, for his

advice. With his guidance and suggestions, the agenda for the seminar was drawn. We are very grateful to Sri Venkatappiah for inaugurating the seminar. We are grateful also to Dr. K. Kanungo, Chief: Agriculture, Dr. R. Subramaniam, Chief: Health, and Sri K. V. Natarajan, Deputy secretary, Planning Commission for their whole-hearted co-operation and personal participation but for which, the seminar would not have been such a success as it was.

Co-operation of Government of India and State Governments

The Director of the Seminar, Sri T. S. Avinashilingam wrote to the relevant departments in the Government of India and the various state governments to send their representatives to the seminar and present papers on the subject. This was reinforced by a circular letter from the Planning Commission. The time that was chosen for this very important seminar was not very convenient, as it coincided with the budget sessions of the Central and State legislatures. We are grateful that in spite of that, the Governments of India, Tamil Nadu, U. P., Maharashtra and others sent their top-level officers to the Seminar.

We are glad that Sri N. D. Sundaravadivelu, Vice-Chancellor of the University of Madras, who had promoted the Tamil Nadu Midday Meal Scheme in a large measure, could give one of the two key note addresses. The Director of the National Institute of Nutrition, Dr. C. Gopalan, gave the other key note address.

The Ministry of Health and Family Planning, Government of India deputed Dr. Kalyan Bagchi, Adviser in Nutrition to the Seminar. Sri E. C. P. Prabhakar, IAS, Secretary for Rural Development and Local Administration represented the Minister for Rural Development and Local Administration, Government of Tamil Nadu. The Tamil Nadu Government also deputed Kumari Shanthi Sudarsanam, the Project Nutrition Officer. The Director of School Education, Tamil Nadu, deputed Sri Samuel Adik, special officer for School Lunch Programme and

the Secretary for Health, Government of Tamil Nadu deputed the Assistant Director in charge of nutrition. The Governments of Maharashtra and U. P. were represented by Dr. S. S. Pore and Miss C. Govind respectively. The Governments of Haryana, Rajasthan, Kerala, West Bengal and others had sent papers. The President, Central Social Welfare Board could not come for unavoidable reasons, but sent a comprehensive note on the working of that Board. The Central Food Technological Research Institute (CFTRI) was represented by the Head of its Nutrition Division, Dr. M. Swaminathan. The Nutrition Research Centre of the Avinashilingam Home Science College was represented by Dr. Rajammal P. Devadas, Mrs. Godavari Kamalanathan and Dr. Usha Chandrasekhar.

The field staff were represented by the District Collector, Sri J. S. Bhango and Thiru Kesavan, his P. A. who is assisting in this work, Thiru Jagadeesa Raghavan, Block Development Officer, two teachers running the school lunch programme, two parents, a president of the Mahila Mandal, an education extension officer and others.

Amongst the International Organisations, the CARE was represented by Sri. Phil Johnston, Madras and the USAID by Dr. C. Puttkammer, New Delhi. Among the national voluntary organisation, Smt. S. Jayakaran (Madras) represented CASA (Christian Agency for Social Action). Thus the many agencies involved in the nutritional feeding programmes were represented at the seminar. The experiences of the field staff which were shared frankly and without any inhibition enriched the seminar and made it realistic in its recommendations. The programme of the seminar and the list of persons participating in the seminar are given in Appendix I.

Thus this seminar provided a valuable opportunity for administrators, planners, scientists and field workers to exchange their views on the feeding programmes currently in operation and which are proposed to be instituted during the Fourth Five Year Plan. The valuable guidelines which emerged

from the discussions are presented in this publication. It is hoped they will be useful in the operation of feeding programmes.

Recommendations

Given below are the recommendations made in the seminar. They will have far reaching benefits for the millions of our children if implemented at all levels.

1. Nutritional Feeding Programmes should be considered as the component of the total development of the beneficiaries. The economic, health and educational factors should be integrated into all the feeding programmes. Therefore, no feeding programme should be initiated or allowed to continue, unless clean space, equipment and safe water supply are assured.
2. Nutritional Feeding Programmes should not be regarded as 'charity or relief' programmes, They are fundamentally programmes for development, and should be woven into the educational and extension fabric of the community.
3. Nutritional Feeding Programmes should not be limited to only one section of the vulnerable groups. While the current emphasis on feeding pre-school children in the rural areas is most welcome, the school children who constitute an organised, institutionalized and easily accessible group, both in the urban and rural areas, should not be excluded.
4. State plan provisions for school feeding programmes should be commensurable with the physical targets fixed in the Fourth Plan Draft, namely, 15 million pupils by 1973-74. This would mean stepping up of plan of outlay by those state governments who have not made provisions earlier.
5. This Seminar welcomes the co-ordinated lead that has been given in the Fourth Plan for an integrated nutrition programme covering all the departments of the central and state governments. The Seminar however, notes

that there are still a number of nutrition activities and development, including research, education and operational programmes, which call for further clarification and strengthening. In view of the multi dimensional nature of the tasks ahead, this could be best undertaken only through the constitution of an 'Expert' group under the auspices of the Planning Commission.

6. Because of the diversity of the problems, no feeding programme can be implemented in a centralized manner. All aspects of the feeding programme such as, production processing, storage and distribution, need to be decentralized as circumstances permit.
7. In view of the wide diversity of conditions prevailing in the various parts of the country regarding food habits, methods of processing and cooking, and preferences, it appears desirable that several formulations for infant and child feeding, should be made available and promoted.
8. Efforts should be taken through nutrition institutes and research centres, to evolve low cost, nutritive, easy to prepare supplements prepared out of locally available indigenous foodstuffs for the feeding programmes, aimed towards reducing our dependency on imported foods. Such foods should be tried out first on selected samples from the areas where co-operation is forthcoming and the benefits derived popularized.
9. There is need to bring about greater co-ordination between the various departments in the state level, as effected by the Planning Commission at the central level.
10. The need for co-ordination, consultation and communication is greatest at the District-Block-Village levels. There is urgent need for evolving a suitable coordinating machinery in the office of the District Collector. For this purpose, one of the functionaries is at the District level should be earmarked for nutritional feeding,

research and education. The 'Expert' group in proposed recommendation 5 may examine who the functionary should be.

11. The coordination needs to be effected also between the various functionaries in the same department and between those in the voluntary and international organizations.
12. The flow of information from the central level to the state government should be streamlined.
13. The Panchayat resources can be augmented through exploitation of the scope of the country yards, and using them properly in the implementation of the feeding programme.
14. There are several problems at the village level. But no problem is too small to be overlooked. The planners should recognise the problems at this level which hinder the ANP. Case studies may be undertaken in the different states through Agriculture Universities, Home Science College and other institutions dealing with nutrition.
15. In order to ensure the success of the nutritional feeding programmes in the villages, there should be adequate mechanism to convey to the decision makers and administrators at the higher levels, the multiplicity, intensity and specificity of problems arising at the village level, such as non availability of time and resources to the functionaries for implementing as the feeding programme, storage, foods, maintenance of records and nutrition education.
16. Nutrition education should be an integral part of any feeding programme and a continuous process. It should precede, accompany and follow any feeding programme. In this light, it appears necessary to review the components of the Composite Nutrition Programme and suitably dovetail it with ANP. The proposed panel group in recommendation 5 may undertake this on a priority basis.

17. Research is needed to spell out for each nutritional feeding programme (whether foods or tablets)
- a) Who are/should be responsible at all levels (line of responsibility.)
 - b) The type of co-ordination necessary, and who should effect it.
 - c) What type and in what forms and how much foods are available? What are their sources?
 - d) In what forms are they acceptable?
 - e) What is the cost per head, in terms of, food, transport, storage, cooking and distribution?
 - f) What is the basis for calculating the number and type of beneficiaries to be covered.
 - g) Who will carry out the trials in the first instance to determine how much, and in what form foods must be given?
 - h) What is the machinery needed for the organisation, implementation and evaluation of the feeding programmes at the Block-Village levels.
 - i) The keeping qualities of the food formulas.
 - j) How to motivate, stimulate, and involve local participation?
 - k) How to locate low cost nutritious foods like "chekurmani leaves" and highlight them in the feeding programmes?
 - l) How to bring about standardisation towards uniformity in the methodology and terminology involved in feeding programmes?
 - m) How to locate and evolve effective methods for nutrition education?
 - n) What are the economic, nutritional, social and asthetic benefits of school, community, and kitchen gardens, poultry and so on.

Chapter II

THE FEEDING PROGRAMMES IN THE COUNTRY

T. S. Avinashilingam

The matter of providing balanced and nutritious food to various sections of the population is a tremendous job in any country; but much more so in an undeveloped country in which there is food shortage, due to explosion of population in recent years. Production of more food is the first and most vital step towards solving this problem. The recent breakthrough in agriculture and the evolution of new hybrid varieties in rice, wheat and corn give us hope, that we may reach self-sufficiency in food in the near future, if adequate steps are taken to introduce these strains widely throughout the country on the hand and to control the growth of population on the other. Along with increased production of food, nutrition education is very necessary, as even in well to do families diseases precipitated by malnutrition and undernutrition are not uncommon.

The magnitude of the problems of malnutrition

Recent diet and nutrition surveys conducted in various parts of the country have indicated that undernutrition and malnutrition are widely prevalent in large sectors, of the population, affecting particularly the vulnerable groups. The surveys show that nearly two thirds of expectant women belonging to the poorer sections of the community suffer from malnutrition. Calorie-protein malnutrition is acute in many parts of the country. Consequently there is a high incidence of nutritional deficiencies. The seriousness of this problem has been pointed out by nutrition scientists, who warn that protein deficiency during pregnancy, infancy and early child-

hood will result in detriment to brain function. It has been found that if adequate amount of protein is not provided during these periods, the injury to brain growth may never be made good at later stages.

A recent survey of the World Health Organisation shows that nearly twenty-five million children are suffering from blindness due to vitamin A deficiency. The large number of blindness, imbecility and other physical defects can be avoided if balanced diet is provided, especially to the vulnerable sections of the population, namely the expectant and nursing mothers, pre-school children and schoolchildren. For this purpose it is necessary to produce protein-rich and protective foods such as milk, vegetables, eggs and fish.

The feeding programmes in the Country

It can never be overemphasised that in order to meet the needs for quality foods, it is necessary to produce urgently sufficient quantities of protein-rich and protective foods such as milk, vegetables, eggs and fish. For this purpose, numerous programmes have been launched and are in operation under the auspices of the central and state governments and voluntary agencies. The midday meal programme is perhaps the biggest of these programmes. This is being carried out wholly in the state sector under the department of education. Maintenance of Balwadis is under the departments of State Social Welfare, assisted financially by the Central and State Social Welfare Boards. Nutritional feeding of about five lakhs of pre-school children is being conducted by the Health Departments of States. The Applied Nutrition Programme under the departments of Community Development, provides protective foods to expectant and nursing mothers and children. Production of Balahar (children's food), is under the auspices of the Food Department of the Central Ministry of Food and Agriculture. The CASA (Christian Agency for Social Action) also supports some feeding programmes.

The money proposed to be spent in the Fourth Plan by the various departments is Rs. 59.36 crores, mainly for the following programmes.

Role of International Agencies

1. Department of Health and Family Planning

- a. Prophylaxis against nutritional anaemia in mothers and children benefitting 4 million
- b. Control of blindness in children caused by vitamin A deficiency covering 6 million children

2. Department of Community Development

- a. Applied Nutrition Programme - New blocks 450
- b. Composite programme for women and pre-school children blocks benefitted 1200

3. Department of Food

Production of Balahar - 2.5 to 3 lakh tonnes.

4. Departments of Education

School feeding programme covering 15 million children.

Many international agencies are playing an important part in these feeding programmes. Among the United Nations' agencies helping in the feeding programme are the UNICEF, WHO and FAO. The CARE organisation of the USA supplies CornSoya Milk (CSM) and other foods to school feeding, industrial feeding and Balwadi feeding. The other international agencies promoting feeding programmes are the USAID, Freedom From Hunger Campaign, World Food Programme, AFPRO and others. Recently an agreement has been signed with the U. S. Government earmarking a U. S. grant of Rs. 1.1 crores for five projects for nutritional improvement, the details of which are not yet available.

At the field level the important agencies for implementing nutritional feeding programmes are the Panchayat Union, the Village school, the school teacher, Balwadi women's clubs (Mahila Mandals), Youth clubs and others. The Panchayats which have the primary responsibility for implementing the ANP have also been entrusted with the responsibility of producing the protective foods such as eggs, milk and fish. Along with the Education department they help in raising school gardens for producing vegetables for the midday meals in the schools. The officials, namely, the Block Development Officer, Mukhya Sevika, Deputy Inspector of Schools and the non-officials such as Panchayat President must co-operate to make the feeding efforts successful.

With regard to all the feeding programmes, particularly those operating in the schools and balwadis, the major questions are two - (1) providing the children with balanced food, (the means for preparing and distributing the meals) and (2) imparting nutrition education to children as to which foods are good for their growth and development, and how healthy and sanitary habits with regard to food and life can be formed. In a sense the second is even more important, because if children know what is good for them they will set out to strive to cultivate them. Thus nutrition education can provide the necessary motivation for healthy living.

Apart from several administrative problems, there are important technical problems of nutrition involved in feeding programmes. For identifying the problems and suggesting solutions, the help of nutrition scientists is essential. Research needs to be undertaken on various aspects. Studies and surveys should be undertaken on our food habits, community nutrition, methods of cooking, food preservation and the ways in which foodstuffs are sold, stored and preserved. Steps should be taken to prevent adulteration. Research is necessary in a variety of other related matters.

While the international agencies such as CARE and UNICEF are making significant contributions to the feeding programmes, continuance of our dependence on such aid will not be helpful either from the point of national prestige or the self-reliance of our people. Now that there is a breakthrough in agriculture and self-sufficiency in food is expected by 1971, the dependence on foreign aid atleast for the feeding programmes should not be necessary. The leadership of panchayats and local boards should be enthused to accept the challenge of self-sufficiency with regard to food for our children. They must feel that it is derogatory to beg for food for the maintenance of our own children. The sooner we become self-sufficient on this very important field of feeding our children, it will be better for our nation and the people.

To conduct this national programme efficiently and well, the co-operation of producers who produce the basic ingredients of our food, our Scientists who can show the way in finding the best combination that will be good for our children of various ages and other vulnerable groups and above all the co-operation of all the various levels of administration at the Centre, State and Panchayats and the people will be necessary.

Chapter III

NUTRITIONAL FEEDING IN THE FOURTH PLAN❖

B. Venkatappiah

It is only appropriate that a subject such as we are going to discuss in this seminar should be sponsored by Sri. Avinashilingam Home Science College which has been doing pioneer work on nutrition for many years, which has had so much practical experience in this sphere. There has been much theory and a great deal of research on nutrition. This is good. We are proud of our scientists and practitioners, many of them with eminence which entitles them to world recognition, who have contributed significantly to the science and technology of nutrition. But they realise, as the rest of us do, that the principal function of nutrition is to nourish. Where even the overfed can be undernourished, so much more can be the underfed. And the underfed constitute the large majority in this country. They are to be found in many areas, many classes, and in some of the most vulnerable age groups. To feed them in order to nourish them—or at any rate to ensure that they are less undernourished—raises the most colossal problems of means and resources, priorities and organisation. At the grass roots, it gives rise to issues of an extremely practical kind.

The object of this seminar is to identify and grapple with those issues. It is this approach - the practical grass root approach—that will, I hope, inform the discussions of the seminar. In order to relate this approach to the basic considerations of action and organization which the Fourth Plan sets out in the context of an integrated programme of nutrition

❖ Inaugural Address to the Seminar

for the country, the following excerpts from the Draft plan will be useful. (See Appendix II also).

- (i) Since resources are limited, it is necessary to establish priorities with reference to needs, classes and areas.
- (ii) It is important to improve the efficiency, and extend the coverage, of the organisations which serve the needs of the priority classes and areas.
- (iii) Programmes of distribution should be supported, wherever this is necessary, by programmes of production, processing and supply.

In so far as this Seminar is specifically concerned with the efficiency and coverage of the organisations which serve the needs of preschool children, school children expectant mothers and other priority classes, as well as specific of nutritional deficiencies its conclusions are bound to be of very great utility in the implementation of the programmes of nutrition in the Fourth Plan.

The place of nutrition in the different Plans :

Upto the end of the Second Five Year Plan, there was, little or no stress on nutrition as an aspect of the developmental effort. Improvement of nutritional standards figured as a plan programme for the first time in the Third Plan. The Third Plan specifically observed, "During the first two Plans, there has been no concerted effort to improve nutrition". The principal components of the programme were education, training and research in nutrition; development and production of foods of high nutritional value; and measures for raising and sustaining the intake of nutritious foods by groups which are particularly vulnerable to the hazards of malnutrition viz. expectant and nursing mothers, infants from birth to the age of five years, school going children upto the age of 11 years and people affected by drought.

More recently, a high powered Working Group on Nutrition was set up by the Planning Commission to formulate an integrated nutrition policy and programme for the Fourth

Plan, to recommend the organisational set up needed at different levels for effective execution of the programmes and to recommend arrangements for interdepartmental co-ordination in nutrition policy and programmes. On the basis of the findings of this Group, the Fourth Plan attempts to set out, for the first time, an integrated nutrition programme for the country. The size of the programme is Rs. 60 crores.

The size of the vulnerable groups :

In India to-day there are about 75 million infants in 0-5 age group and about 20 million expectant and nursing mothers. Half the population of the country consists of children below the age of 15 years. These constitute the vulnerable section of the population. A beginning in the direction of improving the nutrition standards of school children was made during the Third Plan when, in pursuance of the recommendations of the School Health Committee appointed by the Government of India in February 1960, a centrally sponsored scheme of mid-day meals for them was initiated in 1962-63. The number of children benefiting from this programme is at present approximately 11 million. In December 1967 the Secretaries' Committee on Food and Agriculture decided that the mid-day meals programme should be expanded to cover 15 million children by 1971, and that Balahar should be used as the principal component of feeding. The use of Balahar in substitution of, or in preference to, the prevailing items of diet, will, however, depend on its acceptance by the state governments and the local organisations, besides its acceptability to the children themselves.

Assistance from Foreign Agencies

Foreign organisations such as CARE, UNICEF and Catholic Relief Services import food commodities and deliver them at the Indian ports free of cost. The commodities include rolled wheat, bulgar wheat, milk powder, corn flour and vegetable oil. The state governments have to incur the administrative and transport expenditure in connection with the operation of this programme.

Role of Balwadis in Feeding Preschool Children

Some of the most serious effects of malnutrition are found in infants and preschool children. According to various studies in the fields of psychology, health, nutrition and education, conditions in early childhood have an important effect on the future psychological and physical development of the child and hence on his potential contribution to society as an adult. The preschool agegroup is also the most vulnerable. Balwadis are regarded as an important means of reaching children of this age. The services provided by Balwadis include a regular health check up, immunisation against contagious diseases, and formation of good habits of nutrition. Currently, about 6000 Balwadis are involved in the feeding of about 2 lakhs of preschool children. A new scheme for covering about 8 lakhs of preschool children by the end of the Fourth Plan has been formulated by the Department of Social Welfare. Unlike the school meal programme, which is based on food components provided by CARE, balwadis provide a variety of indigenous foods in the form of 'Nashta'. The items include boiled grams, raw vegetables such as carrots, tomato, radish, vegetable salad, banana, oranges, pears, papaya, kharbooja etc., in season; porridge of ground wheat; rice flakes, groundnuts, gram, coconut, gur, murmura, biscuits, khichri etc. Powdered milk supplied by CARE or UNICEF is also supplied along with 'Nashta' wherever available.

The Applied Nutrition Programme

With the object of introducing more balanced diets in place of the present cereal-prone diets, particularly in the rural areas, a countrywide programme of applied nutrition was taken up in the middle of the Third Plan. Nutrition education is propagated through the actual processes of production and consumption of nutritive foods viz., fruits, vegetables, fish and poultry. An important part of the strategy of this programme is demonstration feeding, described as the Educational Meals Scheme, for feeding the vulnerable sections of the

community viz., pregnant and nursing women, and children of below 5 years. The approach adopted in the programme is to demonstrate the possibilities of securing balanced diets to the rural families through self-help or "doing and learning". The participation of Mahila Mandals is crucial to this programme.

Composite programme for women and preschool children

Composite programme for Women and Preschool Children has been envisaged in the Fourth Plan. This programme will centre on the involvement of Mahila Mandals in nutrition improvement activities in blocks outside the Applied Nutrition Programme and the Family and Child Welfare Programme.

Victims of Malnutrition

Before any feeding programme is taken up on a large scale, it is necessary to identify the areas of mal-nutrition so that the feeding programme may be such as to benefit the persons most in need. A recent study undertaken in this context indicates that areas of marked mal-nutrition include those where drought is recurrent, or the expenditure per head per day is less than Rs. 1/-; or the articles of food consumed are of a lower standard such as kesari dal (Uttar Pradesh) or maize and jowar (Andhra Pradesh). Tribal areas are also among those where malnutrition is prevalent. Among age-groups and classes, pre-school children and pregnant and lactating women widely suffer from malnutrition.

Special Scheme :

Some of the schemes in the Plan seek to make a beginning with the fulfilment of the special needs and requirements of specified groups of people, for example, those likely to be affected by nutritional anaemia, blindness or protein deficiency. Programmes for preschool children expectant and nursing mothers will be concentrated in known areas of acute mal-nutrition, and become an important item in the activities of

Balwadis. The efficiency and coverage of the existing agencies, voluntary and departmental, vary in different parts of the country. Better implementation of nutrition programmes is sought to be ensured in the Plan by effecting improvements in organisation and providing for adequate supervision. There are also new schemes for the use of a wider organisational network involving the association of women, so that children, especially preschool children, are properly looked after. Some of the new projects included in the Plan are in the nature of pilot schemes for promoting cheap, nutritious or fortified foods to replace in due course what is received as aid from abroad.

Need for Coordination :

Several departments of the Union Government and State Governments, besides a whole range of voluntary organisations, are involved in implementing nutrition programmes. There is need for systematic communication, consultation and coordination among them. The industrial production of nutritious foods and the organisation of pilot projects for this purpose along with feasibility studies, research and survey concern the Food and Health Departments as well as the Industries Department. Feeding programmes as well as training, education and extension are areas within the purview of the Community Development Department the Social Welfare Department and the Education Ministry.

The Planning Commission is concerned not only with the formulation of the different programmes but also with their integration and coordination on the one hand and their review and evaluation on the other. It hardly needs to be emphasized that the most important part of the coordination of nutrition programme is that which arises in each state. The success of the programme as a whole, will depend on the effectiveness of the machinery in the states, not only for implementation of individual programmes, but for their integration, appraisal and evaluation.

Need for Periodical Appraisal of Feeding Programmes

The flow of data for policy formulation and for effective progress reporting in respect of nutrition programmes has hitherto been very inadequate. It is essential that the state authorities should know from time to time not only the progress of expenditure on Plan programmes of nutrition but also the physical results actually achieved. Periodical appraisal would help in effecting appropriate modifications in nutrition policies and programmes. It should be possible to entrust specific evaluation studies of nutrition programmes to academic institutions as well as to voluntary agencies.

Education of women and improvement of Economic conditions

In the long run, the nutritional needs of preschool children can be met only through improvement of the general economic condition of the bulk of the population and through education of women in the proper methods of nutritional feeding. The vastness of the country, the regional variations with regard to incidence of malnutrition and food preferences, the inadequacy of food resources and above all, the bottlenecks in processing, storage, transport and distribution of food stuffs, underline the need for a decentralised programme based on local resources and local preferences which will not pose exacting demands on a few food ingredients and on an over worked organisational machinery.

Finance a Hurdle

The financial implications of the feeding programmes are very large and the central government and the state governments are finding it difficult to provide the needed funds. Some of the state governments are not in a position to provide even the administrative expenses needed for the transportation and distribution of the food material available from CARE, UNICEF and other voluntary organisations who are ready to provide the food material at the Indian ports.

Chapter IV

❖SPECIFIC NUTRITION PROGRAMMES – PROGRESS AND PROBLEMS

K. Kanungo[†] and K. V. Natarajan[‡]

Better Nutrition -

In most developing countries where bulk of the population is under-nourished, supply and availability of more food is the first step towards better nutrition. In the language of the Fourth Plan, the nation-wide endeavour to develop agriculture along with animal husbandry and fisheries must be regarded as the base of all effort towards better nutrition. More specifically, the state's responsibility in India for providing better nutrition has been clearly stated in the Constitution. Article 47 of the Constitution says: "The state shall regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties..." While the Constitution contemplates a charter based on equality of opportunity for the citizens of the Republic, it is not widely realised that mal-nutrition can be one of the potent factors which will deny both equality of opportunities and efficiency to the large masses of the people.

Mal-nutrition among infants, and especially calorie-protein malnutrition can permanently impair physical and mental growth in the crucial formative years of life. In India today, there are about 75 million infants in 0–5 age group and about 20 million expectant and nursing mothers. Half the population of the country consists of growing children below

❖ The paper does not purport to represent the views of the organisation in which the authors are serving.

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15 years of age, who are vulnerable from the standpoint of nutrition. They constitute the future working force, skilled and unskilled, of the nation.

It is now fairly well known that protein-calorie malnutrition apart from having direct adverse effects, results in higher morbidity from other ailments on account of low body resistance. There are several dietary deficiencies; about a quarter of a million of cases of blindness in India can be traced to Vitamin A deficiency. Defective vision on this account has even a larger incidence. Goitre, pellegra, anaemia, beriberi and rickets are among the other common deficiency conditions.

Integrated Coordinated Approach

In the past, the problem of mal-nutrition has always been given some importance in the welfare context in this country. However, only the Fourth Plan translated into a meaningful programme of action the conceptual recognition accorded to the subject of nutrition in earlier documents. Shortage of resources have made it possible only to make a modest beginning even in the Fourth Plan. Nevertheless, the merit of the policy lies in the fact that for the first time, there is an integrated coordinated approach clearly spelt out. The Plan has briefly brought out the objectives behind the programme and has sought to establish priorities among the needs which have to be met and the classes and areas which will be served. At the same time, emphasis has been placed on improving efficiency and coverage of current programmes and on the fuller harnessing of indigenous resources. In short, a beginning is being made in tackling the problem of malnutrition on a variety of strategic fronts.

Nutrition is no more looked at from the traditional social welfare point of view. It has become very much a factor in economic development. Given the limited resources at the disposal of planners and the variety and magnitude of needs crying for attention, nutrition can be said to have

emerged successfully as a priority item. In other words, nutrition has graduated as a development goal. Policy makers and planners are being increasingly exposed to the importance of nutrition in improving the efficiency of the existing work force on the one hand and the brain potential and the physical development of the future work force on the other. Significantly, nutrition has been now recognised as a problem important enough to be tackled in the path of development.

Programmes in the Fourth Plan

The Fourth Plan attempts to take a total view of nutrition programmes of the Central and state governments as well as local bodies. The coordinated nutrition programme in the Fourth Plan comprises both existing and new schemes reflecting these considerations. Some of the schemes in the Plan seek to make a beginning for promoting cheap nutritious or fortified foods to replace, in due course, what is received from abroad as aid. There are schemes for the use of a wider organisational net work, involving in particular, the association of women for ensuring that priority areas and priority classes (for example, preschool children) are increasingly catered for especially in the rural areas. Other schemes attempt to make a beginning with fulfilment of special needs and requirements, for example, prevention of nutritional anaemia and blindness and more generally, protein deficiencies. Programmes concerned with preschool children, expectant and nursing mothers will be concentrated in known areas of acute malnutrition and will form an important item of action of the balwadies. The Plan notes that the efficiency and coverage of the existing agencies, voluntary and departmental, vary in different parts of the country and contemplates improvement in their organisation through measures including adequate supervision. Nutrition education is not neglected. Nor is the base for all nutrition, viz, programmes of production, processing and supply, fail to receive attention.

Balahar for school feeding

Production of balahar and low cost protein foods is a programme which receives a large outlay in the Plan. The production of balahar commenced in 1966 in collaboration with private millers and with the assistance from UNICEF and USAID. The production level reached in 1968-69 was 26,500 tonnes and is expected to reach 2.5 lakh tonnes in 1973-74. The scheme is based on the assumption that balahar will be supplied free for the school feeding programmes and the receiving state governments would only incur the cost of transportation and administration as they already do for school feeding programme from external agencies. The scheme is administered by the Department of Food of the Government of India.

Weaning Foods

Another scheme of the Department of Food relates to production of weaning foods. The outlay proposed under this programme is only for financing market studies and other promotional activities by the Kaira Cooperative Union. The programme will be assisted by the UNICEF with production equipment, and will receive essential raw materials for the product from the USAID. A pilot plant for manufacturing protein isolates for enriched foods generally and for toned milk in particular, is also proposed in the Plan. It is proposed to utilise under this scheme the indigenously available protein isolates from oil-seeds for the production of toned milk with a view to replace the imported skimmed milk powder and expanding the available milk supplies. As a first step, with the cooperation of the state government dairy at Bangalore, production of about 500 litres per day has already been started and it is proposed to extend this scheme during this year to Madras city also. During 1970-71 it is proposed to expand the production of toned milk to three more centres.

Cotton Seed for Human consumption

The Department of Food also propose to start a pilot production scheme for exploiting the nutrients contained in cotton seed for human consumption. The outlay is intended for the supply of equipment to private millers and for quality control.

Fortification.

Fortification of commonly consumed foods is designed to establish the techniques of fortifying products of mass consumption with calcium, iron, vitamins and proteins. A new scheme of fortification of atta (wheat flour, has recently been approved for implementation. It is proposed that in due course the small additional costs resulting from fortification would be met through a readjustment of the prices at which atta will be sold to the consumers. Similar fortification of salt is another important feature of the nutrition programme. Experiments are being conducted for the fortification of salt with calcium and iron. During this year, experimental production of salt fortified with calcium was undertaken for consumer acceptability trials. These trials have revealed that fortified salt is acceptable and progress will be made in developing the product in the course of the Plan period.

Another important area of fortification is that related to commercial production. Bread is being consumed increasingly in growing urban and industrial areas. Five units of Modern Bakeries Limited have already started functioning which are undertaking production of fortified bread. The entire quantity of bread produced by Modern Bakeries is fortified by the addition of Vitamin A, Vitamin B Complex and Iron. White sandwich bread of Modern Bakeries is in addition enriched with lysine.

Nutrition Education :

Among the schemes which are pilot in nature, mention may be made of the project for nutrition education through the

State Nutrition Bureau. The object of this scheme is to provide mobility as well as the audio-visual apparatus for extension work to state governments which have adequately developed nutrition divisions.

Prophylaxis:

Another pilot scheme concerns providing prophylaxis through vitamins, minerals and other nutrients.

Edible Groundnut and Soyabean:

Among other pilot projects, there is a scheme which seeks to extend the production of edible groundnut flour and soyabean products which are rich in protein. This scheme will be administered by the Department of Food of the Government of India. The groundnut flour is an essential ingredient of balahar and the increase in the production of balahar envisaged in the Plan will have to be matched by the requisite expansion in the production of groundnut flour. Therefore, the Plan contemplates expansion of the capacity of the existing units as well as the creation of new units. The scheme is proposed to be extended to develop the processing of soyabean also.

Acceptability of new Foods:

Studies in acceptability of nutritious foods have also been proposed. Provision has been made for nutrition and dietary surveys.

Food Preservation and Food Craft Centres :

The Department of Food has been encouraging home preservation of fruits and vegetables and has been promoting consumption of processed food and vegetables through their centres in the metropolitan cities. The number of such centres will be increased during the Fourth Plan period. There is a small programme which contemplates the production of peanut butter and the entire outlay on this programme will be recovered from the sale proceeds. Besides these, there is a Centrally sponsored programme of Food Crafts Institutes. One such

institute will be set up in each state for imparting training in the various food crafts, such as, cookery, bakery, confectionery, canning, fruit preservation and other forms of food processing and preservation

Research :

Research programmes related to nutrition are undertaken under the auspices of the ICAR and National Institute of Nutrition, Hyderabad. The record of the work of the National Institute of Nutrition in nutrition research is well known.

Processing of Maize:

It is also proposed to establish a unit for the processing of maize for human consumption. A plant for the purpose will be set up by the Food Corporation of India in 1970-71 for quality control and product testing. There are also programmes for providing cold storage facilities for fruit and fruit products.

Programmes described above comprise those which are connected with agricultural and industrial production of nutritious foods, fortification of foods of common consumption, pilot projects for promoting cheap nutritious or fortifying foods, feasibility studies, nutrition research projects and nutrition and dietary surveys.

Nutrition Feeding:

The other set of programmes in the Plan cover nutrition feeding, training, education and extension activities which are principally undertaken by the Departments of Community Development, Social Welfare and Education, both in the states and in the centre. The programmes of nutrition feeding are directed to the extent possible towards nutritionally backward areas and vulnerable age groups and classes which call for priority attention.

Applied Nutrition Programme

Among these programmes the Applied Nutrition Programme is an important one. Adequate information on this programme is given in the previous chapter.

Composite Programme:

A new programme in the Fourth Plan which goes by the name of Composite Programme for Women and PreSchool Children, is implemented by the Department of Community Development.

An important feature of this programme is the involvement of Mahila Mandals in nutrition improvement activities in blocks outside the Applied Nutrition Programme and the Family and Child Welfare Programmes of the Department of Social Welfare. The scheme will undertake training to women workers in nutrition education. Extension in nutrition will be carried out through demonstration feeding of priority groups the agency being the Mahila Mandals and balwadies. The distinctive character of the scheme is that it seeks to involve women and invoke their natural and emotional bent for nutritional care of the children particularly, preschool children and to institutionalise it as a domestic effort. The scheme seeks to provide an organisational framework in the shape of Mahila Mandals and balwadies, this paving the way for future expansion of the Applied Nutrition Programme. It is essentially of a pilot nature and once it is put on its feet through Central effort, the state governments may be expected to take full responsibility for continuing it.

This programme has five components :—

- (i) Nutrition education through Mahila Mandals ;
- (ii) Strengthening supervisory machinery for women workers ;
- (iii) Encouragement of economic activities of Mahila Mandals ;

- (iv) Training of associate women workers ; and
- (v) Demonstration feeding.

While schemes mentioned at (i) and (ii) above are in the state government sector, the other 3 schemes will be implemented as central sector schemes. Under the scheme for demonstration feeding, Kerala and Gujarat have already initiated action. In the scheme for the encouragement of economic activities through awards to mahila mandals, state governments have been approached for taking preliminary action.

Mobile Extension Unit

Among the programmes relating to extension and nutrition education, the Department of Food proposes to provide mobile food and extension units to popularise nutritious subsidiary foods, promote suitable dietary habits, prevent wastage and to introduce low cost balanced diets. These units will also spread the knowledge concerning food preservation and cookery and collect data regarding pattern of food consumption. In the Fourth Plan, at least 30 mobile food and extension units will commence operation.

School Midday Meals

One of the most important nutrition feeding programmes in the Plan is the scheme for providing mid-day meals to primary school children. It was initiated during 1962-63 as a Centrally Sponsored Scheme. After the Third Five Year Plan the scheme was placed in the State Sector as a Centrally aided scheme with central assistance at 40 per cent of the expenditure. The number of beneficiaries under this programme is at present approximately 11 million. Under this scheme, the total administrative and transport cost per child for the supply of nutrition amounts to Rs. 6 per year, which is borne by government. The other and more important component of the scheme, namely, the supply of food material which amounts to approximately Rs. 40 per child per annum, is donated by CARE.

Arrangements for the transport of the food products from the ports to the respective village schools are made by the State Departments of Education.

Feeding Preschool Children

During the years of drought, the mid-day meals programme in the primary schools was extended in the affected areas to cover the preschool children, pregnant and lactating women mostly through CARE assistance. The scheme of the Social Welfare Department for Nutritional Feeding for preschool children proposes to cover progressively increasing number of children which will reach the figure of 8,00,000 in 1973-74. One of the major components of the programme is to provide nutritive food to the preschool children on the basis of locally available nutritious food including the grains and other items collected during the harvest season. It is proposed to cover 250 days per year in this programme and in drought affected areas where the local food is not easily available, balahar will be supplied with the assistance of the Department of Food. By 1973-74, the Department of Social Welfare intends to involve in all about 26,000 balwadies benefiting about 8 lakhs children.

Other feeding Programmes

There are other minor programmes falling within the category of nutrition feeding, training, education and extension carried out by the Departments Food or Health of the Union Government, such as, provision of audio visual aids, and publicity, extension work through voluntary agencies and food technology training centres. They are not described here in detail.

Problems

Stated briefly, the multitude of issues and complexities of problems associated with nutrition planning and development broadly falls into three categories, namely, (a) operational, (b) psychological, and (c) conceptual and educational.

Operational problems are fairly well known and efforts are being made to tackle them continuously. In fact the present Seminar attempts to collate, analyse and resolve some of the operational problems as they have emerged at various levels of implementing the nutritional feeding programmes.

Extension work concerns itself with psychological problems of nutrition. The psychological problems and issues have got to be given sustained attention as they ramify into many of our social and dietary habits. This apart, the success of an accelerated extension programme related to nutritional planning and development largely depends on the acceptability of the programme by millions of people in various regional and sub-regional settings.

The most important task, however, lies in regard to conceptual problems in nutrition planning. This includes creation of an awareness among all levels and categories of crucial decision-makers of the importance of nutrition as a critical determinant in economic development.

The educational aspects may be broadly divided into two categories: (a) a continuous effort at creation of new knowledge through fundamental and applied research relating to nutritional upgrading or major food ingredients, exploration of newer items, synthetic as well as organic, which could be included to expand the available food basket, improvement at palate and adaptive research to suit varying regional dietary preferences; and (b) restructuring of our courses and syllabi in various disciplines, such as, medicine and public health, home science and catering technology, economics and sociology, and other allied disciplines to bring in the problem of nutrition education in a sharp focus. This necessarily calls for an interdisciplinary approach both relating to research and education. Allied to this problem is also the production of literature in an understandable language which could form the basis of an aggressive extension programme.

Agents of change

Having recognised nutrition as an integral element of development, the question arises whether the Government should merely be content with playing the role of a catalytic agent at the national and regional levels. Training and education, extension and publicity, change of food habits and similar activities cannot be obviously undertaken on an intensive scale at the federal level. The agents of change including gram sevaks, gram sevikas, social education Organisers and mukhya sevikas are all part of the extension machinery which should be utilised fully in a nutrition development programme.

Role of the State

The role of the State includes taking decisions on such issues as the importance to be given for enrichment of cereals and fortification of commonly consumed foods. There are problems even with fortification. For instance it may not be desirable that too many foods in common use are fortified with the same nutrient. An indiscriminate policy of multiple fortification may not fetch commensurate results. There are decisions which have to be taken on what nutrients should be added to which foods. Again, there are problems into increasing the consumption of items in foods, such as, pulses. Roughly 53 million acres or about 40% of the combined acreage of wheat and rice are devoted to pulses in the country. Anticipated pulse production for 1973-74 is projected only at 15 million tonnes or almost 3 million tonnes short of the national need assuming the demand at the ICMR suggested level of 85 grams per person per day. The technological break through in pulse production is yet to come although the research scientists are at this job vigorously.

The Government will have also to decide the outlays that may have to go both in terms of public and private investment in the development of such items as baby foods, weaning

foods, convalescent foods and other nutritious preparations particularly derived from indigenous raw materials. On this again, there can be more than one view. The main problem is that of providing the wherewithal for purchasing these fairly expensive food supplements by the average citizen.

The State has to address itself to the problem of acceptability in feeding programmes which cater to preschool children or school children. The product should be not only acceptable to the children, it should be equally desirable to the community. Promotion of acceptability cannot be achieved by mere propaganda. It is unlikely that children would be willing to take the same preparation, day in and day out, for a whole year and for several years. There is thus the need for a broader base for the preschool and school children feeding programmes and for greater diversity in the choice of food supplements.

Bottle-necks in Organising Feeding Programmes:

There are numerous bottlenecks in organising a large scale preschool nutrition programme. For instance, each child has to be fed with 75 (uncooked weight) of the supplements daily. The food has to be cooked first and the young child will naturally take quite some time to eat this quantity. One person is required to look after the feeding of at least 40 to 50 children daily. Assuming that the number of children in this age group to be nutritionally fed even on a supplemental basis, is at present 25 million, at least 500,000 persons will be needed to look after the feeding programme only. Can we sustain a feeding programme of such a large magnitude on voluntary service? To this, must be added, the cost of fuel, rent of godown and other incidental expenses for 25 million children. The aggregate cost on distribution alone has been estimated at Rs. 25 crores, i. e., the cost will be Rs. 10 per child per year, excluding the cost of food material.

Decisions have to be taken again on the relative role of home feeding and institutional feeding. More than anything

else, mothers have to be motivated and conditioned which can be possible only through sustained nutrition education.

The state has to take a view on such fundamental questions as the relative priorities to be accorded in feeding programmes as between the current work force and the potential work force. When funds are limited, a guiding principle will be to attend to the worker first and then extend the services to other members of the family. Such a discrimination becomes impossible when the food material is handed over at home for cooking and distribution, especially in a joint family.

Collaboration with Industry

There are areas of collaboration between the government and industry in producing nutritious foods which include the following:

- i) Development of products;
- ii) Developing product standards;
- iii) Licencing for production;
- iv) Ordering and off-take of products required for government sponsored programmes; and
- v) Giving of subsidies and tax incentives at the appropriate time for improving the production.

All these areas call for considerable skill in decision making.

Efforts are called for to mobilise the preservation of perishable food stuffs, and for the development of preservation and processing industry. The food crops to be preserved and processed currently include nearly 59 million tonnes of paddy, 18.6 million tonnes of wheat; 25 million tonnes of other cereals, 10.4 million tonnes of pulses, 4.5 million tonnes of groundnut, 1.9 million tonnes of cotton seed, 4.8 million tonnes of potato, 4.5 million tonnes of *tapioca* and a large quantity of fruits and vegetables. Fruit and vegetable preservation, cold storage, protein rich food processing, solvent extraction of oil seeds, modernisation of rice milling, dry milling of maize and modernisation of pulse milling will have to be given special attention.

There are no quantitative studies to guide the government, especially in a developing country, on the effects of specific improvements on output through better nutrition studies, such as, those of J.M, Healey. "The Development of Social Overhead Capital in India, 1950-1960", have been useful but cannot form the basis for decision-makers for planning purposes. Nutrition no doubt affects the quality as well as the quantity of labour input, but to relate for example, a rise in wages of a class of workers quantitatively to a rise in their productivity through improved nutrition, is at present in the realm of guess work. These are, however, questions which if answered, will provide grist for the planners in India today.

The shift which the high yielding varieties programme implies from coarse grains to rice and wheat in acreage, will mean perhaps that calorie and protein yields per acre will rise less than if the incentives and improvements were concentrated on coarse grains. The dilemma of the planner in this case will be whether to opt for the higher value added for acre arising out of high yielding varieties of superior grains or put in more investment in research, extension and development of the nutritionally more important coarse grains.

There are at least 75 million children in India today in the age group of 5 years and below and even if a minimum of Rs. 30 per child is proposed to be spent towards nutritional feeding of these children, the outlay will be stupendous. Suggestions have been made that the funds required for this purpose should be secured through a national cess covering all areas of taxation. The problem will be to mobilise the necessary resources. No doubt, education of undeveloped children would be a waste, but is the consciousness in the community of the issues involved adequate enough for raising the needed resources for children's feeding programmes?

Change in food habits is a slow process and the steps which the State has to take to motivate the right type of changes is another serious problem. Recent surveys have

shown that from nutritional point of view there have been not much change in the pattern of diet of the common man in which the concentration of cereals is still heavy. The changes in income and prices of the food articles have of course affected the different groups of people differently but the tendency to increase cereal consumption continues even with an increase in income. Nutritional considerations seem to play a negative role in deciding the level of diet even in higher income groups. The level of consumption of protective food items even by the higher income groups, though it has shown some improvements, is still below the recommended requirements.

Regarding nutrition deficiencies, the aim of the government should be to attack them in areas where they are persistent and widespread. Vitamin A deficiency, for example, according to the available data is prevalent both among the preschool children and school children. The prevalence rate varies from 2 to 10 per cent in certain parts of the country. The incidence in school children is no doubt high but the really severe form of vitamin A deficiency is not encountered in this group. The limitation of resources would therefore, mean the priority in combating Vitamin A deficiency should be given to the preschool group. Again the problem of Vitamin A deficiency is more important and urgent among the rice eating population. Tamil Nadu, Mysore, Kerala, Andhra Pradesh, West Bengal, Bihar and Eastern U.P. exhibit Vitamin A deficiency more than the rest of the country. Even here, a lower incidence is witnessed in the coastal areas, probably due to the greater availability of fish even for the poorer classes. Therefore, a decision in regard to selection of areas for attacking Vitamin A deficiency should be based on these and other relevant considerations. Similarly, the problem of anaemia, while it is important in children, has a greater consequence in pregnant women. As between the two, the decision-maker has to opt for the potential child rather than the existing one in view of the constraint of resources. Thus we see on almost every issue, the presence of difficult problems of choice between competing demands.

Nutrition research in the future has to be oriented increasingly towards a cost-benefit approach. We have to get the best returns in terms of physical efficiency of the working force through better nutrition programming. For this purpose, identification of the potential working force has to take place and we have to find out the rate of return on various levels of nutrition assistance to the potential working force. This again will involve more than one discipline and research has to be multi-disciplinary if it is to serve the policy-maker.

There are short and long range problems in nutrition feeding. Although total famine has become rarity, the main consequence of lack of food supply is manifested in the economic sphere. The effect is felt most in the inability of the people to perform adequately. Quantity alone is no more the crucial factor in food. Food must be satisfactory in quality as well. While death is a visible consequence of malnutrition, the economic consequence although less visible is more over-riding. Children who survive protein malnutrition do not have a chance to learn well in their formative years as their well-fed counterparts. When this poor capacity is compounded with barely minimum caloric availability, the population cannot be expected to do justice to their normal work. Conventional approaches therefore will not meet the problem. Increasing the per capita income of the population is a long-drawn out task. Reducing the cost of better quality diet is, however, an immediate need to which the government has to address itself. It is in this sphere that research and development has a role to play.

There are numerous problems of coordination at the federal, state and district levels in effectively implementing the nutrition programmes. There are programmes which include government sponsored food distribution for school children and preschool children. There are schemes for marketing low cost high nutritive value foods in the public and private sectors. Village level production and consumption of nutri-

tious foods to the area of action of programmes such as the Applied Nutrition Programme and the Composite Nutrition Programme. These schemes are administered by different agencies, but involve the same categories of beneficiaries and the same geographical areas of operation and perhaps the same raw materials or supplies. Coordinating them requires great skill and imagination. In addition, coordination to be effective, will call for determination of a time sequence or scheduling of the vast development of raw material sources, of the processing facilities, and of the distribution organisation.

The State's responsibility extends not only for promoting the production of nutritious foods, but to the training of personnel at the intermediate and peripheral levels. The urgent need is to encourage the working of the Nutrition Bureau in different state headquarters and to train men at the district levels for undertaking nutrition planning for the districts and for the blocks.

Nutrition is the foundation of health, strength and intellectual vitality of the people. The Constitutional guarantee of equality of opportunity can be carried out only if answers are found to the numerous questions which have been raised above. This paper does not propose to find answers for them.

In the planned economic development of a welfare state, the state cannot be content with being a by-stander and a mere catalyst. Broadly, the following activities demand state participation :—

- i) The state should guide and formulate the base, such as, agriculture, animal husbandry, fisheries, poultry, and other forms of primary production. The state should assist actively the promotion and development of the industrial production of nutritious foods.
- ii) The state should ensure supply and availability of nutritious food at reasonable price to all sections of

the population. Within this framework, the endeavour should be to constantly ensure that the nutritional intake of the priority classes and vulnerable sections of the population is raised and sustained. More particularly nutrition feeding programmes should be so organised that these classes secure the maximum benefit out of them.

- lii) Under the existing circumstances, the state will have to assume full responsibility for promotion, support and encouragement of interdisciplinary research and education relating to various facets of nutrition.
- iv) The success of an aggressive programme of extension in nutrition development and education can only be achieved through the involvement of the multi-tiered state agencies. It is therefore essential that the state must bend its energies through its functionaries and orient their outlook towards meeting the challenges of nutrition development programmes.
- v) The regulatory functions including standardisation, quality control, enforcement of public health and quarantine standards, licencing for production, ordering of products required for government-sponsored programmes and granting of subsidies and tax incentives can only be done by the state.
- vi) Lastly, coordination of inter-agency programmes including activities of the Departments of government at the federal, regional and local levels, national and international voluntary agencies, as well as the other bilateral and multilateral aid programmes, can only be done by the state.

Chapter V

IMPORTANCE OF AND NEED FOR FEEDING PROGRAMMES.

N. D. Sundaravadivelu, *

‘Health is wealth’ is a familiar proverb. Of all the worldly possessions that one would like to have, Health is the most basic. A healthy and strong individual is an asset not only to his family but also for the society. It is to the credit of the ancient City States of Greece that they laid great emphasis on the health of their citizens as the very basis of all their national life. Promoting the health of its citizens was assumed as one of the fundamental responsibilities of the state by them. It was not only because such healthy citizens would be available to defend the country in times of war, but also because the Greeks realised that the entire civilization of mankind can only be built on the solid foundation of the health of the individual.

A healthy and strong citizenry is, therefore, the very basis of all national life. They are real wealth of the country. It is only with this human capital, can the nations build up all the other forms of wealth of a country. It is therefore that the modern governments, whatever be their form, have taken upon themselves the promotion of the health of their citizens, right from infancy to the old age. It is as much the basic responsibility of a welfare democratic state as that of a monarchical form of government or a totalitarian form of government. Weak citizens make a weak nation. Strong and healthy citizens make a strong nation.

If promotion of the health of its citizens is basic responsibility of a government, on what type of individuals

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should the government concentrate upon? Children, often are neglected by their own parents due to poverty and ignorance. Society also neglects them as they cannot be vociferous and demand anything and gherao those in authority. This is tragic. It becomes a tragedy of lasting all effects as child is the father of the nation.

A country like ours is teeming with millions of illiterate underfed and unhealthy persons because we neglected the children of the earlier generation. We cannot afford to perpetuate this mistake. However loud the demands for other priorities be, statemanship dictates that we give the highest priority to children and their all round welfare. It is to the credit of the Government of Tamil Nadu and the great Tamil People that they decided that all the three aspects of food, clothing and education of children should be tackled simultaneously. Out of this desire of the government and the people were born the programmes of free education, free mid-day meals and free clothing. As one singularly fortunate to be associated with all these welfare programmes of the Government of Tamil Nadu in cooperation with the citizens of the state, it is needless to go into the growth and development of free education, which has reached the Pre-University level in 1969-70 in Tamil Nadu. The free midday meals programme of this state, as an attempt to promote not only the health of the children but also their education.

Wayback in 1955, an unforgettable incident, to which the author was an eye witness, made him realise fully the absolute need for free midday meals for poor children if we have to educate them. In the month of November, 1955, he happened to visit one evening the Board High School, in Perintalmanna, Malabar District. There was a meeting of the students over which he presided. In the course of a few minutes he witnessed the sad spectacle of two boys swooning in the meeting, one after the other. On enquiry, he found that it was not due to special strain to which they had been put on that particular occasion. It was a common occurrence in that school

owing to utter starvation. The poor children went walking to the school from distant places, and, in addition, went without a noon meal. This was an eye opener about the conditions prevailing in our schools for children in various districts, there were many starving children both in elementary and secondary schools throughout the state, irrespective of whether they were situated in towns or in villages, in prosperous or in poor districts.

To the poor, the only means of salvation and social uplift is education and, if the poor children are to be educated, at least as well as their richer classmates, if not better, we must ensure certain basic requirements for them. They have to run at present a handicap race with their well-to-do classmates. The poor pupils are subjected to various handicaps. They have neither educational environment or physical provision like proper lighting in their homes to enable them to study at home as much as the well-to-do child can. Nor can they afford the finances to engage private tutors as is done by rich pupils, who need such extra tuition. Their only hope of getting an acceptable kind of education is, therefore, in the class room. It is there that they must assimilate as much knowledge as possible and acquire necessary skills and proper attitudes. Outside the class room opportunities for study are limited for them.

It is thus a paradox that while the state was striving every nerve to provide more and more education for the children of the state, many of the children are either not able to attend school or not able to derive the fuller benefits of school on account of their poverty. Educationists are aware of the terms wastage and stagnation in our schools. Is it really backwardness of a child in its mental abilities that is responsible for wastage and stagnation? The reasons for wastage and stagnation are not to be assigned to the mental backwardness of the child but to the physical disabilities a child is subject to. We know the familiar Tamil Proverb “பசி வந்திடப் பத்தும் பறந்திடும்”. As hunger comes in, it drives away all the ten virtues of man including education”. Children suffering pangs of hun-

ger cannot be expected to be mentally alert, and attentive. Hence they do not fare as well in the class room as their brethren. The physical fatigue that caused the children swoon before at Perintalmanna is responsible also for the backwardness of many of our school going children. A young child is probably the most active of all humans. If he has to be subjected to a fatigue which affects not only his physical health but also his mental ability, should not society do some thing about it? Even as we attempt to spread education, should we not attempt to provide free school meals to the needy children? It is in this context that the others came to realise the value of free midday meals to poor children. The provision of free midday meals to school children has always been recognised as one of the incentives to the regular attendance of pupils enrolled. Many progressive countries have arranged this as one of the essential amenities in the scheme of primary education. The state government was providing midday meals at state cost to Harijan children studying in welfare schools in order to ensure regular attendance. The Corporation of Madras was also providing free midday meals to the poor children in their elementary schools for many years. While these programmes were on operation in limited areas, the great prevalence of poverty and starvation among many lakhs of school children made it indeed necessary, that the scheme of free midday meals be extended to those who needed it.

We are witnessing; the paradox of innumerable pupils and students going without their noon meals or starving during the school day and, at the same time, a flood of charity and hospitality flowing in the country. Ours has been a country renowned for hospitality and charity. Many are the forms in which our spirit of charity has found expression. We value Annadan as the best of the Dans. If our traditional hospitality and Annadan could be diverted, to some extent, to the schools, it will be possible to feed these hungry children without any extra burden being placed on society. These were the ideas that came to the author.

Early in 1956, convinced of the need for free midday meals and the possible part the public can play in providing the same, the author appealed to the elementary school teachers and through them to the parents to provide on a voluntary basis midday meals to the children in their village school. The voluntary scheme of mid-day meals as a people's movement for organised charity was thus launched in 1956, with the people contributing foodgrains and other food stuffs for the scheme. It was in September, 1957 that government took official cognizance of the movement and decided to assist the same. People contributed in cash and kind for the programme. The State also rendered adequate assistance. So, the scheme of free midday meals was placed on a firm footing and as the years progressed more and more schools were covered by this scheme. The Government and the people had the fulfilment that even as education was being spread to the nooks and corners of this state, simultaneously the programme of free midday meals was also catching up and getting expanded day by day,

While thus the state and the people were spreading free education and providing free school meals for the needy children, a time came when the nutritional value of the food also had to receive attention. In our country even in well to do homes food is more for the tongue than for its value. Those who can afford no doubt have full meals daily but still the meals are not always nutritive. The food that one eats fills the stomach but does not promote health. While that is so even in well to do and educated homes it is needless to point out how essential it is to improve the nutritional value of the food that is supplied to the school children. It was only in this context that the great American People's Movement for organized charity, known as CARE came forward to assist and improve the Madras Midday Meals Programme by offering nutritional foods. In the initial stage CARE offered milk powder, rice, bulgar wheat and oil. As the days passed by, with the specific intention of improving the nutritive value of the

midday meals CARE started giving C. S. M. which is a blended food in addition to the other food stuffs.

The CARE assistance has not only helped to improve the nutritional content but also to expand the programme. Thus the Madras midday meals scheme has come a long way to fulfil the basic need of the noon meal for as many as 1.7 million children.

While one of the objects of the midday meals scheme namely improving attendance in schools and promoting the attentiveness of the children has been more or less fulfilled, still there is great scope to improve the programme in order to build the health of the children. What can be done to improve the nutritive content of the midday meals? The report of a recent investigation has shown that due to a predominantly vegetarian diet and consumption of fresh vegetables and greens, the deficiency of Vitamin A and riboflavin is less in children of Tamil Nadu, and is perhaps a pointer to the lines on which we should work to improve the health of our children. Gardening is an educational activity. Nature study and gardening form part of the primary school curriculum. Gardening could not only be an educational activity but also be a source of improvement of the health of the school children. If only proper attention is paid, the vegetables and the greens grown in the school garden can very well be utilised in the midday meals programme in order to improve the nutritional content of the food. Thus while the state government, the people and CARE are providing the basic needs for the children of the school in the form of a noonmeal, the school and the community can do its part too.

The Panchayat Raj system that is in vogue in our villages has been charged with the responsibility of providing free elementary education to the children. The Panchayats can take up on themselves the voluntary responsibility of improving the health of the school children by improving the nutritional value of the food that is given in the schools. Community

gardens could be maintained by the Panchayats and the vegetables and the greens grown in such gardens could be supplied on a no profit, no loss basis to the schools in order to improve the quality of the midday meals. They could set up model gardens, which can be maintained with the assistance of the school pupils and also full time labour and the produce from these gardens can be primarily used for the school children.

Even as we do propaganda to focus the attention of the public on the necessity to provide free school meals for the children, it would be necessary through this forum of the National Seminar that propaganda will have to be carried on to focus the attention of the villagers and the school community on what they can do to improve the nutritional content of the school meal.

The affluent countries of the world have joined together to launch "the Freedom From Hunger Campaign". The removal of poverty even among the grown up is one of the joint responsibilities of the entire world. At the same time the advanced countries have provided compulsory free school meals programme for their school children in order to improve the health of the children from a very early stage. The child is the father of man. Therefore while the child is being educated in order that he or she may grow into a useful citizen of the nation tomorrow, it is necessary at the same time for the state to provide for sound basic health of every child. This could be fulfilled by ensuring that every growing child has not only a square meal, but also all the nutritive contents to warrant proper growth and health. The great Saint Thirumoolar said that by catering to the needs of the body one can cultivate the soul "உடலை வளர்த்தேன், உயிரை வளர்த்தேனே"

Until a stage is reached when even in our country we are able to provide a subsidised school meals programme of proper nutritional value to all the children, the free midday meals programme for the poor has to be continued. It should be supported by local self-effort not only in regard to the

quantity of the food but also in regard to the quality of the food. A National Seminar on nutritional feeding should suggest the various ways and means of improving the nutritional content of the school meals.

Thus, in Tamil Nadu, the programme of free school meals which had its humble beginnings as a voluntary people's movement in 1956 has grown to huge dimension. Now it should turn its attention towards the improvement of the quality of the meals provided and to activate thousands of schools in producing at least in part, their own needs for fresh vegetables and greens and thereby ensure local interest and involvement in improving the health, education and welfare of society.

Chapter VI

APPROACHES TO FEEDING PROGRAMMES.

C. Gopalan *

This Seminar provides a valuable opportunity for administrators, planners, scientists and field workers to exchange their views on the feeding programmes currently in operation and which are proposed to be instituted during the IV Five-Year Plan. Some valuable guidelines which will be useful in the operation of feeding programmes will arise from this dialogue.

Two Major Types of Feeding Programmes :

Feeding programmes may be broadly considered under two major heads. Firstly, there are feeding programmes which are organised purely on an emergency or on a short term basis with the limited purpose of staving off a crisis or catastrophe. Feeding programmes organised in times of famine, floods and droughts; fall under this category. Unfortunately, these emergencies are becoming all too frequent in our country and it is time that a separate cell is instituted in the Food Ministry or in any other appropriate Department of the Government of India to deal with such situations. The feeding and rehabilitation of populations in times of such catastrophes should be organised on a scientific basis so that maximal results may be achieved with minimal resources and in the shortest duration. A mobile task force trained in the mechanics of such operations will be a valuable asset.

The second category of feeding programmes are those which are being operated as part of the overall programme of development of the community, under relatively normal circumstances, and on a more or less permanent or long-term basis. The logical way of ensuring the nutritional status of our population would, of course, lie in augmenting the availability of food.

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bility of food resources, increasing the living standards and the purchasing power of people, and educating them in proper dietary habits. In the technologically advanced countries of the world, where those objectives have been achieved, community feeding programmes do not occupy an important place in plans for national development. However, in our country, for a long time to come, feeding programmes will have to form an integral part of our overall strategy for national development. And, to serve this purpose, these programmes must be organised on a scientific rather than on a sentimental basis and must be operated with streamlined efficiency.

Choice of Priorities

Since our resources are admittedly meagre, it is essential that in the organisation of these feeding programmes we clearly define priorities. In the choice of priorities, we have to be guided by two major considerations physiological and practical.

On the physiological side, it would be obvious that feeding programmes should be directed to protect the vulnerable groups of population, namely, children and expectant and nursing mothers. Today, thanks to the extensive diet and nutrition surveys carried out under the auspices of the Indian Council of Medical Research, we have gathered sufficient data which should provide a proper scientific basis for the organisation of feeding programmes. There is sufficient information as to the magnitude and the nature of different nutritional deficiencies in different groups of our population and on practical methods for their prevention and control. These data should provide a reliable basis for the formulation of priorities on physiological grounds. The three major nutritional problems of public health importance that stand in urgent need of prevention and control are : (1) calorie-protein deficiency in children, (2) vitamin A deficiency in children and (3) anaemias in pregnant women.

On the practical side, the availability of proper institutional framework and administrative infra structure so essential

for the operation of any programme will also condition the choice of priorities. For instance, purely from the physiological standpoint, preschool children can be considered more vulnerable than school children. However, while school children can be collectively reached in large numbers through schools, and while considerable experience with regard to school lunch programmes already exists, facilities for reaching preschool children in large numbers are still very inadequate and large scale experience in the techniques of preschool child feeding has yet to be gathered. These practical considerations would indicate that while feeding programmes for preschool children should naturally receive emphasis, the diversion of major resources in this direction before we have succeeded in building the proper machinery at the intermediate and peripheral levels to operate these programmes will be wasteful and ineffective.

It is fortunate that in the draft IV Five Year Plan, priority has been accorded to the programme of prevention of vitamin A deficiency in children through distribution of two massive doses of the vitamin in the year and the programme of control of vitamin A deficiency in pregnant women through supplementation of iron and folic acid. Both these programmes are eminently justifiable on physiological as well as practical grounds.

School Meal Programmes :

A great deal has been written on the subject of school feeding programmes. The Government of India had appointed a Committee under the Chairmanship of Smt. Renuka Ray to review the whole question of School Health, including school meal programmes. The report of this Committee is a valuable document. Unfortunately, many of its recommendations have still to be acted upon.

Three major aspects with regard to school meal programmes need the consideration of our planners, administrators and field workers.

Integrated Approach :

1. Since our resources are limited, it is essential for us to ensure that our investments in the school meal programme

bring satisfactory dividends. This can happen only if the school meal programme becomes an integral part of a total school health programme. Many of the poor children in our schools suffer not only from malnutrition, but also from various types of infectious diseases. Moreover, the environmental conditions of many of our schools today are far from satisfactory. It is now well established that in the presence of chronic infections, nutrients are not effectively utilised. Supplying nutritious foods to school children suffering from infections has been likened to the pouring of water into a leaky pot. The sensible thing of course, is to plug the leak especially where water happens to be scarce. It is wasteful to attempt a school meal programme in schools where even basic sanitary facilities including particularly safe water supply is lacking. Failure to observe this principle has been responsible for some unfortunate catastrophes in the past. A school should be "licensed" to undertake a school meal programme only if the basic sanitary facilities are available. Such a "licensed" school may be provided partial financial support for the school meal programme. It may also be ensured that all schools where school meal programmes are in operation, also receive the benefit of school health and medical inspection. With such an integrated approach to school health, impressive results could be expected. Unfortunately, today, programmes of schools health and school meal programmes are not coordinated, with the result that neither programme is really satisfactory. The school meal programme is considered to be essentially a programme of the Education Ministry while the school health programme falls under the purview of the Health Ministry in most States.

Nutrition Education

In many cases, school meal programmes are at present being operated more as programmes of "charity" and "poor feeding." In the sole preoccupation with the mechanics of feeding, the longterm objective of school meal programmes namely, the education of the students as well as the community in correct feeding habits, is often lost sight of. School meal

programmes which thus degenerate into "poor-feeding" or "charity" operation, are not self-generating and therefore naturally leave no lasting impact on the community. They are also not conducive to the building up of dignity and self-respect among the children. A recent survey carried out by the National Institute of Nutrition showed that only a very small fraction of parents of school children participating in our school meal programmes were enthusiastic about the programme. The great majority adopted an attitude of sullen neutrality while some were even hostile and resentful. This would underscore the need for preparing the community for the programme and in approaching the whole effort as a means of education. Moreover, unless this "charity approach" is given up, there can be no real improvement in the quality of the programme and it can never really reach sections of the population other than the poorest.

Utilise Indigenous Resources and not Foreign Aid:

In some States of India, school meal programmes are often totally dependent on the support extended by such voluntary organisations like CARE. The position in these States is such that if, for any reason, these organisations decide to withdraw, the school meal programme will automatically come to a close. Such programmes operated almost entirely on foreign support can obviously leave no long-term impact on the community. The object in accepting foreign aid must be to create a situation when such aid would become eventually unnecessary. Unfortunately, however, the experience in many cases is that foreign aid creates the opposite situation in which continuing foreign aid becomes essential. Wherever foreign aid is received for school meal programmes, there should always be a provision for a phased withdrawal of such foreign support with the substitution of indigenous resources in its place.

Feeding Programmes for Preschool Children:

Our immediate major approach in the matter of pre-school child feeding should be directed towards building the

necessary facilities at the intermediate and peripheral levels for mounting large-scale feeding programmes for preschool children in the country. We have to build in our country sufficient number of viable centres at the peripheral levels, through which feeding programmes covering significant numbers of preschool children could be satisfactorily organised. The immense logistic considerations implicit in feeding programmes covering pre school children have apparently not yet attracted the attention which they deserve. Till such time this happens, feeding programmes for preschool children will remain largely ineffective in spite of impressive budgetary allocations.

It would be desirable if the Planning Commission and the Government of India institute feeding programmes for pre-school children in three or four selected centres in the country where the requisite leadership and facilities for supervision and evaluation of the programmes exist. These could serve as demonstration-cum-training centres for the programme. This approach will enable us to build up the necessary expertise for organising and implementing the preschool child feeding programmes on a country wide scale.

It should be obvious that under the present circumstances any large scale programme of feeding of preschool children must be based on locally available inexpensive foods and not on imported foods or centrally processed foods. The magnitude of these feeding operations would be of such scale that it would be impossible to base them on a processed food preparation consisting of two or three selected ingredients. The immense problems of transport, storage and distribution preclude an over-centralised approach to this programme which must, under the circumstances, be necessarily decentralised and diversified. Food available within a radius of ten miles from the village could easily form the basis of feeding programmes of children of the village. The Indian Council of Medical Research has worked out a number of nutrition recipes based on such locally available foods. These foods can be processed by methods which are capable of application at the village or the home level.

Today, the cost of transport, distribution, supervision and administration of most feeding programmes for preschool children represents a considerable proportion of the overall cost of the programme. This can be avoided and real community participation ensured if the village community itself is given the opportunity of, and responsibility for, organising and running the programme. This, however, implies that such feeding programmes for preschool children should be attempted in the initial stage only in those villages where the necessary leadership and social climate exists. The National Institute of Nutrition have been operating a feeding programme for preschool children in some villages around Hyderabad on this basis. This programme has been in operation for two years and the results so far have been indeed most encouraging.

The Needs of the lower middle classes

The main beneficiaries in most of the existing feeding programmes are the poorest segments of the population. Considerable degree of malnutrition also exists among other sections, specially, the lower middle classes - children of teachers, petty shopkeepers, skilled workers, artisans and the so-called white collar workers. The scale and quality of the feeding programmes are such that these sections of the population are not benefited. This is unfortunate because these lower middle classes in many ways constitute the backbone of our society. Nutrition programmes designed to improve the lot of this important group will yield really impressive dividends. If feeding programmes are to be looked upon as instruments of economic development, scientific considerations would dictate that the marginal support implied in the feeding programmes will make a real difference between disease and positive health to these lower middle classes, while in view of the several other inadequacies in the poorest segments, the impact of feeding programmes on these latter, would be insignificant. The current purely sentimental approach to feeding programme should, therefore, be tempered by these scientific considerations. While the poorest group should continue to receive attention,

programmes designed to protect the lower middle classes should also be considered. For example, low-cost nutritious biscuits made of inexpensive locally available foods even in village bakeries on cooperative basis, could form the basis of a feeding programme for this group. Such biscuits stocked in schools, offices and other establishments, and sold to the needy at nominal price, could be one way of reaching this important segment of the population.

Today, fortunately, the right political and social climate for the organisation and implementation of feeding programmes exist at the highest levels. References are being made to Children's Charter and 'Nutrition charter.' It is up to all those interested in the promotion of the nutritional status of our children to take advantage of this auspicious climate and to bend their energies towards ensuring the success of these nutritional programmes.

Chapter VII

INTEGRATED APPROACH TO FEEDING PROGRAMME.

M. Swaminathan*

The diets consumed by a large majority of the population in India are lacking in protective and protein rich foods, such as milk, eggs, meat and fish, and are deficient in proteins, calcium, iron, Vitamin A, riboflavin, folic acid and Vitamin B₁₂. Protein malnutrition and vitamin deficiency diseases are widely prevalent among weaned infants and preschool children. A large percentage of expectant and nursing mothers suffer from anaemias and malnutrition. In view of the shortage in the production of milk, eggs, meat and fish, the deficiencies in the diets will have to be made up by the inclusion of locally available low cost supplementary foods of vegetable origin. Investigations carried out at the Central Food Technological Research Institute, Mysore have shown that processed protein foods based on oilseed meals and legumes fortified with calcium salts and vitamins can be used as effective supplements to the diets of weaned infants, preschool children, school children and expectant and nursing mothers. The integrated approach of the problem of overcoming malnutrition may be discussed under two heads :

1. Increased Production of Foods required for the feeding programme, and
2. Organisation of supplementary feeding programme.

1. Increased Production of Foods

Since the present production of different categories of foods are highly inadequate to meet the needs of the population, systematic attempts should be made to increase food production. The different categories of foods required for the feeding programmes are discussed below.

* Central Food Technological Research Institute, Mysore.

Cereals

The production of cereals should be increased by at least 30 percent as they are the staple foods of the population. Particular attention should be paid to the increased production and consumption of ragi as it is a rich source of calcium.

Pulses

Pulses are the cheapest among the protein foods. Their production and consumption should be increased by at least 50 percent. The daily diets of preschool children and school children and expectant and nursing mothers should contain about 50–100g of pulses. Puffed Bengal gram should be included in daily diet as it can be consumed without further cooking.

Nuts and Oilseeds

Nuts and oilseeds are the main source of oils and fats. Roasted groundnut is an excellent source of protein and fat and can be consumed as such. The diets of school children and expectant and nursing mothers should include 30 and 50 g of roasted groundnuts respectively. Edible oilseed meals can be used for the production of processed protein foods as indicated in a later section.

Milk and Eggs

Milk is an essential food for infants. Hence attention should be paid to increase the production of milk. A greater part of the milk produced should be used for the feeding of infants. Eggs are excellent sources of protein and vitamins. They should be included in the diets of preschool children and expectant and nursing mothers.

Fish

The production of fish should be increased in coastal regions. The diets of preschool children, expectant and nursing mothers should include at least 20 and 50 gm. of fish respectively.

Green leafy vegetables

Since the green leafy vegetables are the cheapest source of minerals and vitamins, they should be cultivated in large quantities and used in the feeding programmes.

Processed Protein Foods and Milk Substitutes

Studies carried out at the Central Food Technological Research Institute, Mysore have shown that (1) it is possible to prepare at low cost, processed protein foods fortified with minerals and vitamins based on oilseed meals and (2) it is possible to prepare milk substitutes and toned vegetable milk fortified with minerals and vitamins based on oilseeds, nuts and protein isolates obtained from them. These foods have been found to be excellent supplements to the diets of children and expectant and nursing mothers. These can be manufactured on a large scale by the government and distributed for the feeding programme.

2. Organisation of the Feeding Programme

The role of different agencies in the feeding programme is discussed below :

Primary Health Centres

The Medical Officer incharge of Primary Health Centres will be responsible for the feeding of the beneficiaries. He will make sure that the instructions issued by the State Nutrition Officer are being carried out effectively. The Medical Officer and his staff will also treat mild cases of malnutrition at the centres.

MCH Centres

The M. C. H. Centres deal primarily with expectant and nursing mothers and infants. They can distribute milk for infants and supplementary foods for the expectant and nursing mothers and preschool children.

Schools

The feeding of school children is the primary responsibility of schools. The schools should be provided with buildings, and equipment for the feeding programme. They should also be supplied the food regularly. The schools can effectively help in growing of vegetables and fruits required for the feeding programme.

Balwadis

The Balwadis are centres where the preschool children will be gathered for recreation and meals. The Balwadis

should be in the same building along with the Mahilasamities. The preschool children should be given preparations like Idli, Pulse or MPF porridge sweetened with jaggery which are rich in proteins and other dietary essentials and which can make up the deficiencies in the home diet.

Industrial Canteens

The Industrial Canteens should provide at subsidised rates nutritious lunch and snacks to industrial workers.

Meal Patterns

The pattern of meals and supplements suitable for each category of the population is given in the Table .

Supplementary Foods for Different Age Groups

S. No.	Age Group	Supplementary foods
1	Infants	Milk (10 to 15 ounces)
2	Weaned infants & preschool children	A: Cereals ¹ - 2 ounces Pulses - 1 ounce Green leafy vegetables - 1 ounce Indian MPF - 1 ounce B: Puffed Bengal gram flour - 2 ounces Jaggery - 1 ounce
3	Expectant and nursing mothers	A: Cereals ¹ - 3 ounces Pulses - 2 ounces Green leafy vegetables - 3 ounces Indian Multi purpose food 1 ounce B: Puffed cereals - 2 ounces Puffed Bengalgram - 1 ounce Roasted groundnut - 1 ounce
4	School children	A: Cereals ¹ - 3 ounces Pulses - 1 ounce Green leafy vegetables - 3 ounces B: Puffed cereals - 2 ounces Puffed Bengalgram - 1 ounce Roasted groundnut - 1 ounce
5	Industrial workers	A: Cereals ¹ - 6 ounces Pulses - 1 ounce Green leafy vegetables - 4 ounces B: Puffed cereals - 3 ounces Roasted groundnut - 2 ounces

A. Pattern of lunches.

B. Ready to serve foods may be given if cooked meals could not be served.

1. The cereals should include some quantities of ragi which is a rich source of calcium.

Cooked Meals

The pattern of meals served should be similar to that ordinarily consumed by the people. New foods should not be introduced as far as possible, as there may be difficulty in their acceptance.

Ready to serve foods

Certain types of ready to serve foods such as puffed cereals, puffed pulses and roasted groundnut can be distributed as a snack and also as a supplement to the diets of expectant and nursing mothers as they may not like to take food at the feeding centres.

Financial and administrative aspects

Before launching the feeding programme, the financial and administrative aspects of the programme should be clearly formulated by the government. The government should levy a welfare tax and income from this source should be used for improving the health and nutrition of the people. The entire cost of the feeding programme must be met by the government from the above source. The feeding programmes will have to be directed by the different departments of state governments eg. (1) Health Department Feeding of infants, preschool children and expectant and nursing mothers and industrial workers (2) Education Department--feeding of school children.

Summary

Before starting the feeding programmes, it is necessary to plan the various aspects of the problem such as food requirements, economic, social and cultural factors, financial and administrative aspects of the feeding programme. All feeding programmes should have an educational influence on the people. The production and consumption of foods needed to raise the levels of nutrition should be encouraged. The Government should levy a welfare tax and this income should be utilised for improving the health and nutrition of the people.

Chapter VIII

FAMILY AND CHILD WELFARE PROGRAMMES OF THE CENTRAL SOCIAL WELFARE BOARD.

Neera Dogra *

Introduction

The Central Social Welfare Board was set up by the Government of India in August 1953 for development of social welfare programmes through voluntary agencies. One of the functions assigned to the Board was to promote such programmes in rural areas where no voluntary organisations existed. Some work has been initiated by Kasthurba Gandhi National Memorial Trust in rural areas through trained mukhya Sevikas but their coverage was necessarily limited because of meager resources and the difficulties involved in providing social welfare services in rural India.

Welfare Extension Project (Original Pattern)

From the experience gained during its initial period of work the Board found that social welfare services, particularly for women and children, did not exist in the rural areas. It was, therefore, considered necessary to develop such a programme and this was done through the scheme of Welfare Extension Projects launched in November 1954.

A Welfare Extension Project served a unit of 25 to 40 contiguous villages with an average population of 25,000 to 30,000 through five centres. The activities included Balwads (combination of creche and pre primary school), craft training for women, maternity services, general medical aid, social education etc. The programme was implemented by a Project Implementing Committee consisting of officials and local voluntary workers. The staff of the Project included one mukhyasevika and one mid-wife at Project level and a gram-

*Chairman: CSWB

sevika, a Dai and a craft instructor at each centre. Each project had a budget of Rs. 25,000, which was shared between the Central Board, the state government, and the local community in the ratio of 2:1:1.

At the end of the Second Five Year Plan 420 such projects with 2004 centres covering about 11,177 villages with a population of nearly 92 lakhs were functioning.

Welfare Extension Project (Community Development)

In 1957 the Welfare Extension Project Programme was revised and it was found that there was some element of duplication between the women and children's programme of the Ministry of Community Development and the Welfare Extension Projects of the Board. In order to (i) avoid overlapping of services, (ii) ensure all women and children's programmes were handled by a specialised agency, and (iii) pool all the resources available for women and children's programme, so as to enrich its contents, it was decided to locate Welfare Extension Projects in Community Development Blocks on a coordinated basis.

Each W. E. P. (C. D.) covered 100 villages (the entire block) with a population of about 60,000 and had 8 to 10 centres as against 5 centres in a project of original patterns. The contents of the programmes of these were the same as those of the Welfare Extension Projects originally started in 1954. The staff of a project included two Mukhyasevikas (one from Community Development Block and one from the Board), eight to ten gramsevikas including two from the dais Block, six balwadi teachers, two craft instructors and four dais. They worked under the direction and guidance of a Project Implementing Committee, consisting of representatives of the Block Advisory Committee, Block officials and local voluntary workers.

Part I of the budget of such project was of the order of Rs. 1,84,000 for a period of five years, which was shared by the Central Social Welfare Board, State Government and Community Development Block in the ratio of 12:6:5. In addition

the salaries of one mukhyasevika and 2 gramsevikas were paid by the Block/State Government. Part II of the budget for which no ceiling was prescribed was made up of public contribution.

At the end of the Second Five Year Plan, 3340 centres of 321 projects of the coordinated pattern were functioning in 29,217 villages covering a population of about 164 lakhs. As on 1-4-1967 there were 264 projects with about 2,800 centres which provided services to 24,000 villages covering a population of nearly 140 lakhs.

In 1961 it was decided to make the local voluntary organisations responsible for the continuance of welfare programmes. consequently 1629 centres of welfare Extension Projects of original and coordinated pattern were handed over to mahila mandals by 31st March 1966, to be run with 75 percent assistance from Central Social Welfare Board.

Demonstration Projects for Integrated Child Welfare Service

While reviewing the programme for women and children developed by the Central Social Welfare Board in rural areas during First and Second Plans, it was felt that due importance was not given to the welfare of the children. It was, therefore, considered necessary to organise pilot projects in rural areas where services in the field of health, nutrition, education, training and welfare could be provided to meet the total needs of children on a comprehensive and integrated basis. All the children the in age group of 0-16 in the selected area were to be covered under the programme.

Where as the State Governments were implementing agencies of the Demonstration Projects for Child Welfare as a whole, the Central Social Welfare Board was made responsible for organising balwadis in the project areas. The staff of the project consisted of a Chief Child Welfare Organiser, four Child Welfare Organisers, a Lady Doctor, Mid-wife and Balsevikas. At the Block level, the programme of the project was implemented by a Functional Committee of the State Government consisting of the representatives of various Departments, State Social Welfare Advisory Board and

Voluntary Workers. The Chief Child Welfare Organiser was the ex-officio Secretary of the Committee. A special Balwadi Committee was set up by the Board to look after the Balwadi programme. At the end of the Third Five year Plan, 17 projects were running in 17 States/Union Territories with 424 balwadies.

Family and Child Welfare Scheme

In 1961 the Committee on Child Care appointed by the Central Social Welfare Board with a view to plan out a comprehensive programme for children recommended improvement of the balwadis by converting them into Child Development Centres. An evaluation committee on Welfare Extension Projects reviewed this programme in 1964 and made recommendation, to organise integrated programmes of Family and Child Welfare in as many community development blocks as possible within the available resources.

Based on the recommendation of these committees, the services already existing in the rural areas under different patterns were revised to develop country-wide programme for children with particular reference to the preschool child by utilising the resources of the family and the talents of mothers for this purpose. Thus a new scheme of Family and Child Welfare was prepared by the Central Social Welfare Board in 1964, and was reviewed by a Study Group appointed by the Planning Commission. The scheme was further discussed with representatives of the Department of Social Security (now Department of Social Welfare), Department of Community Development, representatives of the Finance Ministry, Chairmen of State Social Welfare Advisory Boards and representatives from several state governments. It was finally approved by the Government of India in the Department of Social Welfare in 1967 and implemented from 14th November 1967.

Approach, objects and scope of the programme

The Family and Child Welfare Scheme is the largest single

national programme directed towards the welfare of women and children, specially in rural areas. The Family and Child Welfare Project aims at the integrated development of pre-school children and for this purpose it provides training to young mothers, in home craft and mother craft and also makes available such existing services in the Community Development Blocks as are necessary for the proper growth and development of children and general well-being of the rural family.

Objectives and guiding principles

1. Objectives

The Family and Child Welfare Programme has the following basic principles and objectives:—

- 1) that in all programmes of social welfare, child welfare should get priority,
- 2) that within the field on child welfare, preschool children should get more attention;
- 3) that in planning welfare services for them, the following basic needs should be met:—
 - a) safe birth after proper spacing which involves family planning, maternity and child welfare programmes.
 - b) Protection from unfavourable climate, clothing, and safety measures against hazards of environments.
 - c) Adequate nourishment for children.
 - d) Adequate shelter in sanitary surroundings.
 - e) Protection against diseases, specially providing for comprehensive and timely immunization against infectious diseases.
 - f) Opportunities for indoor and out-door life including games, play etc.
 - g) Love and affection in the family environments.
 - h) Opportunities for training and development.
 - i) Adequate provision for early detection and minimum treatment of physical, mental, emotional and social handicaps and mal-adjustments.

The scope of the programme of Family and Child Welfare may be defined as indicated below:—

- 1) Provision of integrated social welfare services to children in the villages, specially to preschool children;
- 2) Provision of basic training to mothers and to young girls in homecraft, mothercraft, health education, nutrition, and child care;
- 3) Assisting women in the villages, through Mahila Mandals and specially established centres as well as an existing agencies for obtaining supplementary work and income;
- 4) Promoting cultural, educational and recreational activities for women and children;

II. Guiding principles :

For the effective functioning of the scheme, the following guide lines may be kept in view:—

- 1) As far as possible the basic needs of children are met through family;
- 2) That all available services in the vicinity such as primary health centre, the play centre, nutrition services etc., should be drawn in and integrated so as to ensure the total development of the child;
- 3) That specially trained and oriented workers with understanding of needs of children should be made available;
- 4) Since child's mother plays a very important role in the child's life, it is necessary that not only is she associated with the provision of services to the children but she is also equipped by proper training to continue in home the work started in the Balvikas Kendras;
- 5) Public cooperation and voluntary participation is

the core of the Family and Child Welfare Programme. In the implementation of the programme, therefore, the cooperation of the Panchayati Raj institutions, child welfare experts and persons belonging to different disciplines like doctors, social workers, family planning workers, teachers, etc. may be sought

III Programme and Services:

The Family and Child Welfare Project would consist of the following:—

- 1) **Main Centre:** preferably at the block headquarters with two sections:—
 - A) Balvikas Kendra
 - B) Griha Kalyan Kendra
- 2) **Five Sub centres:** in the key villages of the Block basically functioning as Balvikas Kendras with provision for running extension services of the Griha Kalyan Kendra in due course.
- 3) **Aided centres;** to be run by local Mahila Mandals or voluntary organisations.

Main Centre :

One of the key villages in the community development block selected for Family and Child Welfare Project would be selected as the main centre which will serve as a focal point with an institutional base. It should be so located as to be easily accessible by the entire block population. The main centre should not be situated in a municipal town.

A) Balvikas Kendra :

The Balvikas Kendra will cater to the needs of children upto the age of 11 years with special reference to the age group 0 - 6. It will include a creche cum day care centre for children of working mothers and a preschool. Provision of health services and nutritious diet will form an integral part of this programme. It will provide the following services:—

a) Age group 0 - 1 (with assistance from Maternal and child health centre.

- i) periodical physical check-up
- ii) milk distribution and supplementary feeding
- iii) treatment of ailments and referral services
- iv) immunisation
- v) advice to mothers about child care

b) Age group 1 to 2½ years (By organising a Creche)

- i) physical check-up and immunisation
- ii) physical care including bathing etc,
- iii) feeding
- iv) rest and recreation

c) Age group 2½ to 6 years (By organising a Balwadi)

- i) physical check up
- ii) supplementary nutrition
- iii) development of senses and habit formation
- iv) informal education through play activity

d) Age group 6 to 11 (By organising a Play Centre)

- i) recreational and cultural activities
- ii) work interest
- iii) referral services for children in need of special care

b) Griha Kalyan Kendra :

The main activities of a Griha Kalyan Kendra will be as follows:—

- a) Organising training of young mothers in subjects like home craft and home-management, mother craft and child development, family nutrition, family clothing, environmental sanitation etc.
- b) Providing an institutional base for the functionaries of the Community Development Block which are responsible for providing services as family planning, maternity and child Health (Primary Health Centre). Applied Nutrition Programme, industrial training etc. Thus the Griha Kalyan Kendra build-

ing and staff can be used for organising demonstrations for Family Planning, production and distribution of nutritive foods including milk, education in personal hygiene, health and sanitation.

- iii) Providing extension service of the Griha Kalyan Kendra has been set up and provided training to young mothers available for training at the Block Headquarters and the other surrounding villages for about a year or so.

The Griha Kalyan Kendra will itself serve as a demonstration centre of a model home with a model kitchen where about 15 young mothers and leading village women will receive training for a fortnight. The syllabus will include subject like personal hygiene, environmental sanitation, home-craft and home management, mother craft, child development, family nutrition and feeding, family relationship, family budgeting, preparation of children's and other family clothing, family planning, citizenship education, personal and environmental sanitation etc.

Half of the training period will be utilized for simple informative talks and the remaining half for practicals in subjects like cooking, food preservation, tailoring, embroidery, laundry and child care. In organising talks and demonstrations the additional Mukhyasevika would seek the cooperation of her colleagues in the Primary Health Centre, Maternity and Child Health Centre, Applied Nutrition Project, Family Planning Centre, Social Education Centre, Craft/Industrial Training Centre, local schools etc. In addition, experts from outside Home Science colleges, training centres, nursery schools, officials dealing with education, health, nutrition Family Planning, Industries, social welfare etc. at the district Headquarters will be invited.

The training should also include cultural activities for women and children make use of the fund of folk-lore, so as to make use of the traditional ways of transmission of cultural heritage from generation to generation. Wherever possible,

suitable craft training should be organised at the premises of the centre so as to enable the women to supplement their family income. In order to make this aspect more useful, assistance of the State Industries Department and Industrial Extension Officers of the Block level may be sought.

2 Sub-Centres

While the main centre will serve as a model of Family and Child Welfare activities at the Block, its activities will be extended to five sub-centres. Each sub-centre will be run by a trained Balasevika assisted by Kendra Sahayaks duly oriented for the purpose. In the beginning the main programme at the sub-centre will be a replica of Balvikas Kendra of the main centre. In addition, the Mukhyasevika and the other staff of the Griha Kalyan Kendra at the main centre will also use extension methods to propagate women's programmes in several ways. Specific programmes of literacy, social education, family planning, applied nutrition, etc. would be organised by holding periodical meetings of the village women under the auspices of the Mahila Samiti. In the extension of these activities, the project staff would seek the cooperation of other members of the extension team of the block staff. The local Balasevika could consolidate these activities by assisting the Mahila Samiti in their programmes and by undertaking home visits, holding meetings of mothers, parents etc. In propagating women's activities, the Balasevika would be assisted by the second Kendra Sahayak.

3 Aided Centres :

In addition to the concentrated efforts at the main centre and modest but regular activities at the sub-centre, the project staff and other colleagues in the extension team would also stimulate local voluntary effort in the surrounding villages. This would be done mainly in two ways. Firstly, the village women who would return after training at the main centre would be utilised as the promoters of local effort. Secondly an attempt would be made to organise Mahila Samity in these villages which, with modest financial assistance from the

Central Social Welfare Board and with the organisational and supervisory support from the project staff may organise aided centres

The aided centres can start any one of the activities of the main centre, depending upon the need of the locality - this could be a balwadi, a creche, a craft training centre, a production centre etc. and other activities of the Family and Child Welfare Programme.

Resources-Budget and allocation of funds

The following will be the resources of the scheme :—

- 1) The Government of India through the Central Social Welfare Board to the extent of 75% of the approved budget.
- 2) The State Government through the concerned Departments to the extent of 25% of the approved budget.
- 3) Local community, Panchayat Samitis, Block Advisory Committees voluntary agencies, etc. in cash or kind to enrich the programme.
- 4) The United Nations Agencies through UNICEF in consultation with the Social Development Division of ECAFE in the form of assistance for organising training programme, equipment for the Balvikas Kendras and the Griha Kalyan Kendras, sanitary equipment for buildings, vehicles such as Vans, Jeeps, Scooters and bicycles.

The Schematic budget for one Family and Child Welfare Project for a year will be as follows :—

1. Recurring

Head of account:	One Main Centre	Five Sub Centres	Functional Committee	Two Aided Centres	Total
i) Pay & Allowances ...	7,020	11,100	2,880	...	21,000
ii) Contingencies ...	1,000	5,000	600	...	6,600
iii) Play and Educational equipment	2,500	...	...	...	2,500
iv) P. O. L,	1,500	...	...	...	1,500
v) Feeding charges for women trainees Rs. 2/- per day (15 trainees for 15 days for 10 batches)	4,500	...	...	...	4,500
vi) Supplemenlary Nutrition to children	2,500	9,350	...	...	11,850
vii) T. A. & D. A.	...	...	600	...	600
viii) Aided centres at Rs. 1000/- per year	...	...	...	2,000	2,000
Total	19,020	25,450	4,080	2,000	50,550
ix) C. P. F.					1,260

2. Non-Recurring (for five years)

i) Building (Proposal to be sent)	20,000	15,000	...	...	35,000
ii) Equipment (not covered under UNICEF list)	5,000	15,000	500	...	20,500
Total	25,000	30,000	500	...	55,500

Role of different agencies in planning and implementation of the scheme.

The scheme of Family and Child Welfare formulated and implemented by Central Social Welfare Board aims at the pro-

vision of integrated and comprehensive services with the active cooperation and coordination of agencies like Department of Social Welfare, Department of Community Development, Panchayati Raj, Ministry of Health and Family Planning, Ministry of Education, Planning Commission etc, at the Central level and their counterparts in the states.

The UNICEF in collaboration with other international agencies like FAO, WHO, Social Development Division of the ECAFE in Bangkok is also assisting in the implementation of the programme.

The role of various agencies in the planning and implementation of the programmes is detailed below:

Central Social Welfare Board

- i) The Board will be responsible for laying down the broad policies and guide-lines about the scheme in consultation with the Government of India in the Department of Social Welfare and UNICEF.
- ii) It will act as a liasion between the State Government, and the State Boards on the one side and the Department of Social Welfare, UNICEF and other Ministries concerned with the scheme on the other
- iii) It will arrange funds for implementing the programme and releases to the state board from time to time.
- iv) It will make arrangements for the orientation and training of workers including organisation of seminars and conferences.
- v) It will ensure cooperation of various ministries connected with the programme at Central level.
- vi) It will issue instructions on different aspects of the programme from time to time and will assess and evaluate the work done in these projects through the inspection and counselling machinery.

State Social Welfare Advisory Board

- i) The State Social Welfare Advisory Board will implement

the programme at the state level under the guidance of Central Social Welfare Board and in consultation with and the cooperation of the state government.

- ii) It will constitute state level coordination Committee with representatives of departments like health, Social welfare education, community development etc. and ensure coordination of services.
- iii) The state board will furnish to the Central Social Welfare Board survey schedule, map of the Block Budget and staffing pattern and other details.
- iv) The state board will furnish proposals for the constitution of the functional committee and ensure issue of notification by the state government.
- v) The state board will be in charge of appointments, transfers of all the staff except Kendra Sahayikas in the Projects..
- vi) The state board on the basis of the budget approved by the Central Social Welfare Board will claim funds from the Central Social Welfare Board and State Government and arrange releases for the functional committee from time to time.
- vii) The state board will refer any deviation in the approved pattern of the programme to the Central Social Welfare Board for prior approval.

Cooperation of various agencies

The following are the broad areas in which the cooperation of various agencies has to be sought in the implementation of the programme.

i) Social Welfare Department

The department dealing with social welfare will issue notification constituting functional committee on receipt of the recommendations from the state board.

- ii) The department will also make necessary provision in their budget for their share of the approved budget and regulate

the release of funds periodically including advances on the basis of procedure followed by Central Social Welfare Board:

2. Development Department/Planning/Panchayati Raj

- i) Specific instructions in regard to the formation of the functional committees on the pattern already agreed upon have to be issued to the block panchayat samiti, according to the provision of the Panchayati Raj Act or under the residuary powers of the state government.
- ii) The block development officer should act as the Treasurer of the functional committee.
- iii) The block selected or likely to be selected for Family and Child Welfare should also be selected for Applied Nutrition Programme. The villages selected for sub centres under Family and Child Welfare should also have Applied Nutrition Programme there.
- iv) The various functionaries of the block like the Social Education Organiser, Agriculture Extension Officer, Animal Husbandry Officer, Industries Officer Officer-in-charge of Applied Nutrition Programme and cooperation etc , should give necessary assistance for the development of the programme.
- v) The services of one Mukhya Sevika and two/three Gram sevikas should be made available for implementation of the programme. The mukhya sevikas and gram sevikas of the Block should also be deputed for training at Family and Child Welfare Training Centre.
- vi) The Panchayat Samiti should make available rent free accommodation/cash contribution therefore for various centres till such time as buildings are constructed. The sites for construction of buildings free of cost should also be arranged to enable the functional committee to undertake construction of buildings with the grant of Central Board.

Education Department

The Balvikas Kendras should also be selected as centres

for school feeding and school health programme and such other assistance as admissible for pre-primary schools may also be extended in the area.

Health Department

- i) The doctor incharge of the primary/health centre or any other officer in the health/medical department at the district/block level should be ex-officio member of the functional committee.
- ii) The primary health unit/Sub-Centre thereunder and any other government dispensary working in the Block should arrange:
 - 1) Regular health check-up
 - 2) Immunisation
 - 3) General Medical Aid
 - 4) Campaigns for sanitation
 - 5) Lectures and demonstration to women trainees at Griha Kalyan Kendras and organise family planning programmes,

UNICEF

At international level the UNICEF has undertaken to provide the following assistance in the implementation of the scheme.

- i) Assistance for training and orientation programmes and seminars at all levels.
- ii) Equipment for the project centres
- iii) Scooters, cycles and motor vans
- iv) Tube wells, hand pumps and sanitary equipment.

Chapter IX

UNICEF AND THE APPLIED NUTRITION PROGRAMME

Ramdas*

The UNICEF assists the Applied Nutrition Programme in its three phases of operation, i. e. planning, development and evaluation.

1. PLANNING

Food and nutrition are comparatively new sciences but during the last three decades, elaborate and comprehensive amount of research work has been done. Adequate knowledge is now available for being passed on for acceptance to communities and individuals in order to improve their daily diets. The communication of such knowledge and its translation into action forms the basic core of the present-day food and nutrition policies. The Applied Nutrition Programme is basically a key to transmitting the basic nutritional knowledge on these subjects to the local people through an effective educational process.

The ANP, has undergone a number of changes during the last few years. In India, it was started in 1959 under the caption of 'Expanded Nutrition Programme' but from 1962 onwards it is known as 'Applied Nutrition Programme'. The concepts and approaches under this programme have been changing with the availability of new experience from time to time. The way this programme has been developing and the additions and modifications being introduced in its working clearly shows that it is a dynamic and developing programme. As to where and how the programme should be initiated in needy areas or countries, is the responsibility of the international agencies FAO, WHO and UNICEF. Visits are usually made by the representatives of these agencies to stimulate concerned governments to think on this subject and try to make them interested in the programme.

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The national governments ask a number of questions on this subject. They have to be educated to accept it and to try it on a pilot basis. With the help of the available data, gathered locally through discussions or from the reports available from the participating countries and in consultation with the local technical departments of agriculture, health education, for UNICEF initiates thinking of the governments for some action on the subject. UNICEF is not a technical agency but undertakes the responsibility of early negotiations with the concerned participating countries so as to prepare them for starting a few pilot projects to gather experience from their working.

Coordination

UNICEF takes full advantage of the available technical competence of the two sister organizations of the United Nations, viz. FAO and WHO, and coordinates its activities with them, on the one hand, and maintains a liaison with the national governments and thus prepares favourable grounds for launching such projects on a small scale in selected areas.

UNICEF assumes additional responsibility of collaborating with foreign and national voluntary agencies which can be involved in this programme and can support its implementation. Further, UNICEF tries to maintain liaison with the agencies like F F H C Cs (Freedom from Hunger Campaign Committees) of foreign and national countries, and branches of the Rockefeller and Ford Foundations. Contacts are established also with the agencies like USAID, CARE, High Commissions and Embassies of other countries. UNICEF thus collaborates with governmental and non-governmental agencies both for the effective implementation of the Applied Nutrition Programme in the participating countries.

Finalization of agreements with national governments

As soon as some agreement, in principle, is reached, the experts from FAO and WHO discuss the details with the government's technical departments and advise them to draw up suitable plan of operations befitting the local needs. Joint

visits are paid by the representatives of the three agencies including that of UNICEF. Plans of operations is thus prepared, adequate attention by giving to the preparatory work. This exercise is a *sine qua non* for the effective implementation of the programme.

2 DEVELOPMENT

The plans of operations, which are agreed upon and signed, stipulate certain responsibilities which are to be shared by the international agencies including UNICEF, on the one hand, and the participating governments, on the other. Usually UNICEF undertakes the following responsibilities:

Training

The international agencies including UNICEF attach maximum importance to training of concerned persons under this programme. It helps the training programme in the following ways:—

Strengthening of training institutions :

It helps the strengthening of the existing training institutions in the country so as to equip them reasonably well so that they may impart training to the concerned persons effectively. These training institutions are the agricultural, and Home Science, Veterinary Colleges, gram sevak¹ and gram sevika² training centres, social education training centres, rural health centres, medical colleges, Audio-visual aids, transport other educational aids stipends and other allowances for training the instructors of such institutions are made available so that they may be able to impart the right type of training to the functionaries or the students in their respective fields. Officials from the concerned departments of agriculture, health, education social welfare, community development, etc., are given short-term courses at suitable centres so as to

1 Village level worker (male)

2 Village level worker (female)

equip them with the necessary knowledge which may help them to train local people properly. Experience has shown that for an effective implementation of the programme, about 25 to 30 different categories of persons-officials and non officials from the higher to the village levels have to be trained. The entire expenses of training for all categories of workers are met by UNICEF

Higher level training in nutrition :

In order to meet the growing needs of the suitably trained hands at the senior level from concerned disciplines, UNICEF meets the expenses of their training in appropriate institutions within the country. It provided assistance in the past for sponsoring candidates to the London/Ibadan Diploma Course in Nutrition but it has been discontinued for the last three years.

Training of medical personnel :

It supports the training of medical personnel responsible for training programme under short-term nutrition courses at appropriate institutions in the concerned countries. At present, UNICEF is assisting the National Institute of Nutrition, Hyderabad, in running a three months 'certificate course and a nine months' M. Sc. (Applied Nutrition) course. About 25 candidates are sponsored every year for attending these courses.

Special services in initial stages

In the early stages of implementation of the programme, some technical support for developing the various components of the programme becomes essential. Experts are required in the field of horticulture, vegetable seed processing, poultry, rural dairying, fisheries, nutrition education etc. In such cases, UNICEF places certain funds at the disposal of FAO for employing such experts who work in the participating countries and assist in developing the respective components of the programme.

Production of Protective Foods

UNICEF provides assistance to the production components of the applied nutrition programme, particularly in the following fields :

Vegetable and fruit growing:

UNICEF (under the plans of operations) assumes the responsibility of assisting the development of school, community and home gardens. It provides quality seeds, suitable tools and implements, fertilizers and pesticides. It also provides irrigation lifts which may be ordinary indigenous lifts or diesel or electric pumping sets. UNICEF helps the training of the school teachers and private individuals in the technique of raising vegetables and fruit on improved lines. Seed production farms are developed or strengthened. Seed processing equipment is supplied at suitable centres so that this aspect may also be attended to properly.

UNICEF has been assisting, on, a selective basis, poultry programme in the project areas. It helps the training of the private operators. It arranges to supply poultry equipment like incubators, brooders, mixers, grinders and other essential equipment at suitable places to help the development of the programme. It assists the starting of regional production centres in selected areas where from suitable stock of birds is supplied to the project areas. Transport is supplied for providing services and for supervisory work. UNICEF helps in the control of diseases of the poultry birds by supplying medicines initially.

Pisciculture :

In order to exploit this rich source of protein, inland and marine fisheries programmes are encouraged by UNICEF.

Rural dairying :

Equipment and supplies are made available for handling of milk - its chilling and distribution.

Preservation and storage of protective foods

Small assistance is provided by UNICEF for the preser-

vation and storage of protective foods at the local levels. UNICEF proposes to support this aspect on an intensive basis in future.

Strengthening of village institutions

The village institutions like mahila mandals (women's clubs) and youth clubs are the important vehicles for the communication of nutrition knowledge among the village communities.

Nutrition cells in health departments

UNICEF gives some equipment and supplies for Nutrition cells in Health departments. Transport and essential equipment are also provided by UNICEF to the nutrition cells for carrying out simple clinical and dietary surveys in the project areas.

Literature it's printing and distribution

In the initial stages, UNICEF assumes responsibility for getting the literature (prepared by the international and national experts) printed and distributed to the important training institutions and to the project areas. UNICEF provides some assistance for that purpose also. Two films are now being prepared for the states of Kerala and Tamil Nadu with the support being provided by UNICEF.

Seminars, conferences, study tours etc.

UNICEF makes funds available for holding important seminars and conferences under the applied nutrition programme. It arranges for study tours of the concerned personnel.

2. Consumption

Training of persons in the proper consumption of protective foods is as essential as their production. Demonstrational feeding programmes are, therefore, arranged and new recipes introduced so that the local communities may be able to utilize the protective foods produced by them effectively. In order to make better use of the locally available food stuffs and through the introduction of new recipes, feeding programmes are arranged mainly in two ways.

Feeding of the vulnerable groups at the village level

The village women's clubs, known as mahila mandals, arrange educational feeding programmes through balwadis. Through this method, the parents get interested in the programmes and new practices are learnt by them. The women who participate in such demonstrations adopt such practices in their homes. UNICEF supplies some equipment to these institutions and help their fuller development.

Feeding of Schools children

The produce of school gardens is utilized for feeding the school children in addition to the donations of food stuffs made by local communities. CARE is involved in the school feeding programme on a fairly large scale. The garden produce is utilized in supplementing the school feeding programme in the project areas.

3. EVALUATION

Evaluation by local agencies

UNICEF is greatly interested in the evaluation process, as it is through this method that the overall impact of the programme is determined and its short comings found out. UNICEF is also interested in knowing as to how the equipment and supplies being made available by it are being put to use in the project areas under the different components of the programme. This quantitative and qualitative making, of base line surveys, periodical evaluation of the programme and terminal evaluation are all very essential. In the plans of operations agreed to, suitable clauses have been added, in consultation with FAO and WHO, that UNICEF would make funds available for survey and evaluation also. UNICEF undertakes to assist the process of evaluation by making some funds available to suitable evaluation organizations in the initial stages only; but, later on, the participating agencies are expected to as same such responsibilities themselves.

Special evaluation by outside agencies

UNICEF has made available funds to the Indian Institute of Management, Ahmedabad, on the suggestion of the Government of India for carrying out an evaluation of the applied nutrition programme of the country.

4 FUTURE SCOPE AND EXPANSION OF THE PROGRAMME

The Applied Nutrition Programme, being educational in its content and scope, is a basic programme which is vitally needed, particularly in the developing countries of the world where malnutrition is widespread and vulnerable groups are its main victims. The quantum of protective foods in the daily diets of the masses is rather inadequate and most of the calories are derived from cereals. The understanding and need for having optimal quantities of protective foods in daily meals is not fully appreciated. The applied nutrition programme aims at achieving two things. To educate the family in better nutrition and to stimulate local production of protective foods in school, community and home gardens and through raising of poultry and fish. An effort is made to show to the local people as to how this can be brought about in the local environments with their existing resources.

The pilot projects have demonstrated that nutritional standards can be improved if the applied nutrition programme is systematically implemented with the full participation of the local communities. It has produced an impact wherever it has been suitably implemented and modified to suit the local conditions. The government is convinced about the importance of the programme and has made a sum of Rs. 10 crore available for its implementation during the Fourth-Five-Year Plan (1969-1974). Besides, the state government will be providing resources to run the programme on effective lines.

The international agencies including UNICEF are greatly interested in the phased expansion of this programme in the developing countries and are keen that through systematic evaluation, the strengths and weaknesses of the programme may be found out so that necessary amends and modifications in its working may be timely made and its future expansion may proceed on sound lines.

Chapter X

CONTRIBUTION OF U.S. A. I. D. IN THE NATIONAL NUTRITION PROGRAMME

Charles Puttkammer *

In this summary the contribution of USAID to the national nutrition programme. This, however, does not include the financial assistance to various research activities, e. g. nutrition economics and nutrition family planning studies. Financial assistance is also being given to various GOI-sponsored projects like establishment of community canning centres in rural and urban areas and the upgrading of quality control and food analysis laboratories.

Although USAID does not claim to have been responsible for all of the progress which has been made in this programme we do believe that we served as a catalyst in the design and implementation of the activities described below.

Recognizing the implications of malnutrition for economic development and national growth, USAID identified the qualitative side of the food problem as a priority area of concern. Since September, 1966, the Mission has been concentrating its nutrition efforts in the areas.

- i) policy acceptance of nutrition as a prime GOI concern
 - ii) fortification of staple foods,
 - iii) child feeding,
 - iv) nutrition education
 - v) utilization of indigenous protein sources, and
 - vi) commercialization of low cost high protein foods
- The most encouraging development thus far has been the significant increase in both public and private consci-

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ousness of the problem of malnutrition, and awareness of the possible means of combatting it.

Within the government, decision makers at the highest levels have become aware of the need for aggressive, centrally directed and effectively coordinated programme. This has resulted in:

- 1) The establishment of top level (secretary's level), Nutrition Policy Coordinating Committee lodged in the planning Commission to direct and coordinate national nutrition activities;
- 2) An India-proposed resolution in the U. N. General Assembly calling for increased international attention to this problem; and
- 3) A well delineated and reasonably well supported nutrition section of the GOI Fourth Five Year Plan;
- 4) Within the private sector, this awareness has resulted in the establishment of a food-industry-wide Protein Foods Association designed to facilitate the development and commercialization of low cost protein foods.

Our efforts to assist the GOI and the food industry in their various nutrition programmes have contributed to:

- 1) Lysine fortification of Modern Bread;
- 2) Atta fortification with groundnut, vitamins and minerals on stream in Bombay and scheduled for Delhi and Calcutta for late April or May;
- 3) Major technical problems overcome in the fortification of salt with calcium and iron;
- 4) "Bal Amul" a weaning food now on the market,
- 5) A plant to produce degossypolized cotton seed floua installed in Hubli,
- 6) AID is currently working with about 20 firms in India now involved in development, testing or sale of protein products;

- 7) For Financial Year 1970 child feeding programmes total 15.6 million beneficiaries including 3.3 million expected to be in the preschool category.
- 8) 28,100 tons of Bal Ahar have been produced. Production of improved Bal Ahar (bulgar, groundnut, flour milk solids) is in progress at two flour mills in Madras since October, 1969, and
- 9) The AID-sponsored Marketing Workshops help bring more sophisticated practices in the local industry.

Chapter XI

THE NUTRITION WORK BEING DONE BY CARE WITH PARTICULAR EMPHASIS ON THE PROGRAMME WITHIN THE STATE OF TAMIL NADU

Phil Jhonston *

CARE has been assisting the people of India for the past ten years through large feeding programme which are arranged with the state government. Our food supplies have arrived in massive quantities and have been channelled through government departments to ultimately reach children in Elementary Schools.

Tamil Nadu has the distinction of being the first state in India to promote midday meals programme for school children and is also the first State which accept CARE's offer in providing assistance and improving the midday meals programme. Since 1961, CARE has brought many crores' worth of food supplies to supplement the activities of the state government in the ever expanding midday meals programme which now reaches sixteen lakhs of children located in approximately thirty thousand schools. As laudable as the achievement is and as proud as we are of the relationship which exists between the Tamil Nadu Government and CARE, recent scientific data indicates that both the government and CARE should re-examine the concentration of this food in a school feeding programme. In more economic terms, if the state has available to it a quantity of 60,000 tons of food which it can invest, to which age - group should it be given in order to secure the highest return?

There are three choices: First is the general category of needy among the citizenry. This group could certainly use the food assistance. Secondly, there is the group of school-going children. The food being given to this group serves to pur-

* Administrator CARE, Tamilnadu.

poses: (a) it provides for almost all of the daily nutritional requirements, and (b) it becomes an attraction for attendance. Actually, this is but one of several incentives which the Department makes available to enhance school attendance. The investment gained from the midday meals programme can be measured in terms of increased enrollment, reduced wastage and higher degrees of scholastic retention. The third choice is in the area of preschool children. If the state has only so much of resources which can be invested in feeding a portion of the population, would it be best to concentrate the investment in the pre school age group?

To assist in this determination, the situation today needs to be reviewed exactly. It will be seen that the availability of calories and the three selected nutrients was higher, both in 1950-51 and 1960-61 than in 1955-56. The comparison must be considered somewhat unfair because 1955-56 was a bad agricultural year when India experienced drought in some parts of the country and deficient rains in others. What is strikingly unfortunate is that the availability of calories, as also for other selected nutrients, per capita per day, even in 1968-69 is observed to be lower than in 1960-61 in spite of the fact that 1968-69 was a normal agricultural year which had also benefited from the first fruits of the green revolution.

"The implications of these statistics are terribly discouraging, they suggest that the nation, over time, is health-wise becoming weaker in spite of the fact that it enjoys a longer expectancy of life. Whereas the longer expectancy of life will make for the survival of more individuals, lower levels of nutritional availability will make the majority of them less productive tomorrow than today. More specifically, the children born in 1960-61, who are 8 to 9 years of age today, will enjoy a better prospect of life than the children who were born in 1965-66 and are at present 3 to 4 years of age. The same applies to the children born last year or year before last since these two would have, in their early formative years, experienced a nutritional standard lower than the children born 8 to 9 years ago.

“Not only the nutritional standards observed in 1965-66 and in 1968-69 are lower than those observed in 1960-61. This shows that far from winning the battle of nutrition we have been gradually losing it with our nutritional standards declining over time. Since increasing evidence is becoming available that those who live in conditions of malnourishment in their early years are dwarfed, both mentally and physically, more or less permanently and are never able to recover, to the full, even when conditions of adequate nutrition are brought about, a children in free India even in the late sixties often face the prospect of a terribly limited life because they are physically or mentally retarded”*

It is obvious that from almost any point of view, humanitarian, social, political, or nationalistic, we must invest in the preschool age group first, or the future growth of both the children as individuals and the nation as a whole will be restricted. It should, however, be recognized that the Government of Tamil Nadu is among the most responsive States in India to the problem of the preschool age group. Only recently the Department of Social Welfare announced a new programme of CARE and Government assistance for the construction of one thousand preschool children and pregnant/lactating women's feeding centers. The Department of Health is preparing a similar programme which will use the Maternity Child Health centers as the focal point for a new programme. The Labour Department is presently spreading the Industrial Nutrition Programme to the preschool children and their mothers of industrial workers of the state, a large part of it is concentrated in Coimbatore. We are, indebted to the Avinashilingam Home Science College for the assistance in determining the proper menu which is used within this Industrial Feeding Program. Last but not least is the R. D. L. A. Nutritional Feeding Programme which we provide food through municipal maternity homes.

* Indian Institute of Public opinion. *The Monthly Commentary on Indian Economic Conditions Annual Number 1969*, New Delhi pp 147-14

CARE is anxious to assist the Government in these as well as additional programme for the vulnerable group. CARE's offer of assistance of food and funds for capital costs is equally true for any state in India. Our organization's role is to assist in the development or acquisition of the infrastructure needed for the permanent continuance of these programmes. A specific example of our reaching towards this goal can be seen in Tamil Nadu with the provision of central kitchens and supporting godowns which will cover all of the midday meal centers. This large kitchen, centrally located in each Panchayat Union, has the capacity to store, prepare and deliver to the individual elementary schools all of the food which the children require. It is the Government's hope that each Panchayat Union will have one of these large kitchens fully equipped with stainless steel cookers, specially designed food cans and delivery vehicles within the next few years. It is hoped that after they are built and the infrastructure is ready for the perpetuation of the Midday Meals Programme on a more scientific basis, CARE will channelise more of its assistance to preschool children, an area to which we attach the highest importance.

Chapter XII

NUTRITION ACTIVITIES OF CHRISTIAN AGENCY FOR SOCIAL ACTION RELIEF AND DEVELOPMENT.

Susheela Jayakaran*

Formerly CORAGS (Committee on Relief and Gift Supplies), for the past four years this organisation is known as CASA (Christian Agency for Social Action, Relief and Development CASARD). CASA has come to be accepted both nationally and internationally as a voluntary agency. Mere relief alleviates the distress temporarily, so with a view to create long lasting benefits CASA's emphasis is more on the development of each individual.

CASA's activities have been made possible by generous gifts of international churches and organisations such as the World Council of Churches, Church World Service, Lutheran World Relief, Bread for the World of Germany, CORSO (Council for Relief Services Overseas) New Zealand, Inter and other church aid organisations in Britain, Australia, Holand, Denmark etc. Roughly 5 crore pounds of staples, milk powder and oil worth, 4 crore rupees under the PL 480-INDO-U. S. agreements, have been received and distributed. Other commodities such as hospital supplies, clothing, soap, heavy equipment and other food items worth, about 3 core rupees, were also received and distributed during the year 1969. These enormous quantities handled by CASA involve a tremendous amount of planning, organising, supervising, reporting and accounting.

During the year 1969, 1.2 million persons have been served through 5576 distribution points under 502 contact persons throughout the country. These noble voluntary

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workers known as CASA's Contact Persons and Distributors forming links in the chain of food distribution, give their time and service willingly and ungrudgingly, carrying on enormous load of responsibility.

Food for work

One of our major concerns in the use of these food materials is the need to create a sense of dignity and self reliance among the beneficiaries and to take away the sting of beggary and dependance. With this end in view the "Food for Work" projects were conceived. Under local leadership, workers are mobilised for constructing roads, bunds, shelters, reclaiming land and deepening wells. The food is given to the worker and his family during the period he serves in the project.

In Baramati and Saswad taluk of Maharashtra waste weirs were constructed as a 'Food for Work' project in collaboration with the government. In the chronically drought stricken Chamarajnagar area of Mysore state, 500 irrigation wells were completed bringing 2500 acres of land under irrigation. Under the initiative of ACRES, which is an agency of the Church of South India Dioces in Bangalore. This project has transformed the whole economy of the area and poor farmers are now able to raise two to three crops instead of depending on an uncertain monsoon.

The well deepening project of Tamil Nadu undertaken by the Church of South India Diocese of Madras during the drought in 1969 saved several thousand acres of standing crops from perishing for want of water. The reroofing of 500 elementary schools in Chingleput District was done in cooperation with the state government.

An irrigation dam constructed in Chainpur in Bihar has brought 1000 acres of land under irrigation. The Bihar Government has extended full co-operation by providing additional reinforcements.

These are just a few examples of 'Food for Work' projects out of a total of 254 completed in 1969, serving 5 lakhs of

people. Thousands of farmers have been bettered since cumulatively 30,000 acres of land have been brought under irrigation.

Volunteer youth service

An attempt is made to provide adequate opportunities for young university students to be exposed to social service, during the vacation for about 4 to 8 weeks.

Emergency

Urgent help has to be rushed for the victims of fire, flood or famine. The victims of the flood disaster in Surat been rehoused in a colony called CASANAGAR- The Rajasthan famine received, immediate relief. Long range development project such as wells irrigation canals, water reservoirs, several miles of road and school buildings also were under taken. The devastating cyclone in Guntur area of Andhra Pradesh was met by the leadership of CROAP (Christian Relief Organisation of Andhra Pradesh) Food supplies, blankets, utensils etc. were rushed to Ahmedabad in Gujarat, for the people affected by communal riots. About 26 such emergency relief projects were handled by CASA last year.

Agricultural development projects.

Financial assistance is given partly on a repayable basis and partly, as a grant, for agricultural projects. 47 such projects were under taken costing rupees 5 millions.

Institutional feeding

About 5 lakhs of needy persons, mostly children, are given dietary supplements in orphanages, boarding homes, schools, hospitals and other institutions. There are nearly 4 thousand institutions receiving CASA foods

“Give a man food he can eat for a day
Teach him to fish he can eat for a life time.” Malnutrition has been plaguing our Nation. Mere doling out food stuffs makes people more and more dependent. There is much igno-

rance in regard to **nutrition** and balanced diets. There is the misconception that **within** a limited budget, a balanced diet is impossible. Deep rooted beliefs, superstitions and fads are great hurdles. CASA's food for Work Projects and Institutional programmes bringing millions of adults and children under their purview, presented a very fertile ground for sowing the seeds of nutritional knowledge.

Nutrition Education

During 1969 several local groups have been inspired to spread the gospel of nutrition to the people and villages around. Training seminars, talks and demonstrations have been held in various places all over India. The co-operation and interest shown by schools, hospitals, public health centres, rural clinics madar sangams, and other associations of women devoted to social service, have been most encouraging. Many individuals, groups, and institutions are now turning to CASA for nutritional advice. Requests for menus, diets, recipes, talks and demonstrations have steadily increased in 1969. Through 220 meetings at villages where 'Food for Work' projects are operating, at institutions receiving CASA foods and with groups seeking nutritional help; roughly 35000 people have come under the influence of CASA's Nutrition Education programme. An outstanding achievement in 1969 has been the production of a novel idea in visual aids for teaching nutrition. Scripts and dialogues for broadcasting and enacting are now in the process of preparation. Avoidance of technical terms and simplifying the points has been the main concern in the preparation of teaching material.

Institutions and individuals are stimulated to make the best use of available land for gardening purposes. Considerable success has been achieved in getting them to grow papaya plants yellow pumpkin creepers, drumstick trees and various types of greens. In many places we have succeeded in getting people to use top of radish, beet roots and carrots and also the skin of ridge gourd.

Family Planning:

Nutrition Education makes a good forerunner for Family

Planning motivation. The concern shown for the whole family while giving Nutritional advice tends to inspire confidence in people. This makes them very receptive to family planning motivation.

Conclusion:

In a small but integrated and effective way CASA's team of workers are substantially contributing to the nutritional uplift of the people, simultaneously helping them to help themselves. No one can deny that better Nutrition will lead a healthier nation. This is our title for all the Nutrition publication in 69. It is significant that both Nutrition and Nation begin with "N" and as important as the Flag is to the Nation, so important is food to Nation. The National Flag and Nutritious food seem inseparable from a **HEALTHY NATION**.

Chapter XIII

“PLACE OF NUTRITION IN TAMIL NADU’S RISING ASPIRATIONS”

E. C. P. Prabhakar.*

Theories, academic or otherwise, with ideological and philosophical undertones have their restricted usefulness when workers in the field get together, to thrash out their problems and lay down guide lines for the future.

Nutrition is a multifaceted subject requiring a multi-disciplinary, coordinated approach. The main factors which determine levels of food consumption and nutrition are related in the final analysis to the state of economic and social development of the population concerned.

Straightaway our thoughts rush to the development and achievements of the past 20 years of planning. The first plan envisaged a mixed economy and very little was done towards accelerating economic development or for social equality. The Second Plan set a socialist pattern of society as its broad objective of economic policy, its main objective being a sizeable increase in the national income, to raise the standard of living, expansion and employment opportunities and reduction of income and wealth inequalities. The Third Plan was intended to create a self-reliant economy in order to achieve the take-off stage.

We are all aware of the modest achievements of these plans and we are also alive to the fact that the degree of success depends upon the intensity of implementation, subject of course to normal seasonal conditions. At the same time, it is important for us to realise that what we are attempting to

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do in this country in a few decades, had taken a few centuries in the so-called developed countries.

The question asked in a very interesting paper by Daniel Lerner is whether in developing countries all over the world "rising expectations is giving room to rising frustrations". In other words the non-fulfilment of the demand for the good things of life-universally accepted as better food, better clothing, better shelter, produces frustration. Have rising aspirations been balanced by rising achievements. Strangely enough the answer is, materialistic aspirations, can be achieved only with rapid economic growth, whereas realistic aspirations can be achieved only to the extent, the people themselves respond to environmental and social change. This will mean eradication of illiteracy and a creation of demand in the rural areas for better food, better clothing and better shelter. Therefore, what is called for, is a blend of materialistic and realistic aspirations on the one side, which would present the right atmosphere for rising achievements.

This point can be illustrated from the experience of France. The French nation throughout its past history had been categorised as a "perennially developing nation." But the new generation after the last world war, where France for the first time in its history had surrendered to a foreign power, - a set back so momentous in its history, determined to wipe out the stigma attached to it and it is today among the foremost countries of the world. In short it is a national demonstration of what the will of the people can do.

As far as Tamil Nadu is concerned, Agriculture has been established as the centre-piece of over planning and to meet our food requirements for an estimated population of about 49.9 million people in 1973-74, at 18 ozs. per head per day, food grain production has been set for 79 lakh tonnes. With the high yielding varieties, multi-cropping and minor irrigation programmes, there can be no doubt about reaching the target. Incidentally vegetable development is also a special feature of the agricultural programme for this State.

It would also be interesting to note that simultaneously

massive efforts have gone into the field of family planning. The policy is to aim at a reduction in birth rate from 40 to 25 per thousand by 1974. On this score however, we should not be penalised by a reduced member of M P.'s in the Parliament.

Even on the Industrial sector, the Industrial Estates programme and growth of small scale and village industries has been exceptional. But for the recession which is now found to be lifting. There is no doubt that Tamil Nadu will once again lead the country in Industrial Development,

In the field of Education, it is shocking news to learn that only 34.1% of the population in Tamil Nadu are literates. However, UNESCO has come up with a functional literacy programme which basically tackles adult education and involves the setting up 40,000 literacy centres. The cost of the five year programme will be of the order of Rs. 9 crores and aims at making literate, one crore of illiterates in the age group of 15-40 years. The programme has just been received and is expected to be implemented by the Rural Development and Local Administrative Department.

It remains only to refer to the Community Development and Panchayati Raj set up in the State. We are modestly proud of our achievements and we have determined to cover all villages with drinking water, school buildings, link roads and rural electrification by the end of 1972. This is a programme of people's participation, where practically every item of work involves public contribution either in cash or by labour.

Rural Man Power schemes of the order of Rs. 40/- lakhs annually are implemented. There are 40,000 Prosperity Brigade Volunteers, who have come forward to contribute their leisure hours for improving the standard of living of the community.

All this is said merely to highlight the fact that an honest attempt is being made to blend socio-economic objectives with objectives of growth. Therefore, that Tamil Nadu has reached a stage where a well planned nutrition programme can be set in motion.

We have now been entrusted with a massive feeding project sponsored by CARE. This project will cover 1000 Balwadis including construction of building, a small kitchen, and feeding programme for pre school children and expectant mothers. Thus conditions prevalent in Tamil Nadu lend themselves to meet the challenge of "rising expectations to be balanced by rising achievements."

Chapter XIV

PROBLEMS IN FEEDING PROGRAMMES ADMINISTRATORS' VIEWS.

Santi Sudarsanam*

The Applied Nutrition Programme in Tamilnadu has been in operation since 1962-1963. Seven Blocks have already completed their five year period and the programme has been handed over to the Panchayats for continued implemenation. There are 7 blocks in operation at present, two of which have been started only in 1969-70,

The problems encountered in the feeding Programme under the Applied Nutrition Programme may be enumerated as follows:

1. Problem of continuous availability of the food to be distributed to the preschool children from the gardens and the poultry units. Due to seasonal variations and lack of water the vegetables and fruits from the community and school gardens are not made available throughout the year. During the Summer season even the egg laying is reduced and eggs are not forthcoming for regular meals. During such periods only the skim milk is distributed.
2. The problem of collecting the eggs from the individual units is also faced by the Balasevika to go from house to house and collect the eggs for the feeding programme.
3. The Panchayats are not regular in their contribution of the Rs. 10/- agreed to be paid to each Balwadi for fuel and sugar.
4. The members of Mahalir Mandrams do not come regularly to participte in the prepartion and distribution of the food articles.

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5. When a Balasevika is on leave there is a dislocation in the feeding programme.
6. In many cases the feeding programme is mistaken for a free distribution of food for poor children as a charity measure and not understood as an educational programme.
7. Where there are more than one feeding programme in a block e. g. Applied Nutrition Programme feeding programme by Family and Child welfare scheme, there is comparison. Under A. N. P. the food articles are to come from production units and in the Family and Child welfare the food is purchased.
8. Coordination of work at Block and Village level has to be better organized. There should be a better understanding between the production and distribution agencies.
9. Diet and Nutrition surveys-initial and repeat, have to be done regularly. These surveys are time consuming. The results also have to be studied and steps taken to remedy the short comings. The women workers are not sufficient in the blocks for this purpose. The cooperation of the Directorate of Health Services is necessary for this.
10. Sanitary handling of food is very important. Due to lack of accommodation, lack of storage place and lack of water and a proper washing place, the distribution of food does not take place under sanitary conditions.
11. There should be more effective supervision by Mukhyasevikas and Gramasevikas* and mere checking and signing the registers and not sufficient. A supervision schedule could be prepared every month to ensure regular visits to each village.
12. Peoples participation has to be spontaneous and continuous. ANP feeding programme should not be treated as a government programme but a programme of the people. The local people must take more interest

* The Mukhyasevika or Gramasevika

in the feeding programme and realize that the feeding programme is for their children and therefore they must take more interest in the production and distribution.

13. Frequent transfers due to administrative reasons also affect the organization of the feeding programme. The workers newly transferred need to be trained to understand their role in the programme.
14. Nutrition Education activities should go along with the feeding programme. The women workers should be well equipped with teaching materials and Extension methods to educate the children and mothers on the importance of foods and nutrition.
15. Food prejudices take time to be overcome and the women workers have to be very patient in their educational activities. Only workers with experience and good at personal relationships have to be posted in ANP Blocks.
16. Nutrition and feeding programmes should be given due importance in all state plans.
17. Annual seminars may be held on feeding programme so that there is better coordination between the different agencies conducting feeding programmes e. g. the director of rural development, director of health services, department of education, CARE, CASA etc.,
18. Continuous Training is found necessary for all the workers in the Feeding Programme.
19. More emphasis may be given to Nutrition Education activities and funds allotted for preparation of aids, research projects, publications etc.
20. A continuous drive to enlist the cooperation of the local people for the feeding programme may be carried out by all the members of the block staff.
21. The production programmes could be so planned that there is a continuous supply of food to the Balwadi during the programme period as well as after the assistance is withdrawn.

Chapter XV

PROBLEMS IN FEEDING PROGRAMMES-ORGANISERS' VIEWS.

Rajammal P. Devadas*
& B. Sharadambal*

Organising feeding programmes for the needy is not a new venture in our country. 'Community Feeding' existed in the ancient "Gurukula" system, mainly to establish the quality of the different members in society. Even today, philanthropists help to feed pupils in schools, so that young people can complete their education successfully without going hungry. Mass feeding is a daily ritual in some temples of South India.

In our Five Year Plans for national development, nutritional feeding programmes are an integral part. Various steps are being taken at the national and international levels to overcome malnutrition through organising feeding projects as pre schools feeding, school lunch, industrial feeding and 'Applied nutrition.'

All these feeding programmes have been planned with sound and well thought out objectives at the higher levels with the help of international agencies and experts. To what extent are the objectives being fulfilled and the programmes are carried out successfully is a pertinent question.

Because of the loopholes present in the planning, organisation and utilization levels, several feeding programmes do not appear to achieve the expected, permanent results. The gap between those who plan, and the institutions, agencies and individuals who implement the programmes, is great. The many bottlenecks and problems which block the effective organization of the feeding programmes, remain unidentified unnoticed and unsolved.

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The need for coordinating and guiding all the nutritional feeding programmes is more crucial today than ever before. The concepts and objectives of these programmes have not been understood by the donors and the receivers.

Who are the Organisers?

The organisers of a feeding programme are the people who foresee a need for the feeding programme, plan, organise, administer and if possible evaluate the programme. They may be officials or non officials-individuals or groups or institutions. They may or may not know the principles of nutrition. But they have a great concern for the starving masses, and large hearts to extend their services to the suffering humanity.

Factors essential for the success of nutritional feeding :

A feeding programme can never succeed by mere adequacy of funds or administrative orders. For the success of a feeding programme, the following foundation is necessary! Besides adequacy of economic resources, it should have a scientific basis and people's cooperation. For the efficient management of resources, to derive maximum benefit, the organisers should plan in advance realistically, the various steps taking note of all the possibilities and hurdles.

Types of Feeding Programmes :

Feeding programmes are of two types: Those which satisfy hungry people by giving them some food, and those which have an educational basis. The former is dictated by pity and charity oriented. The later makes the beneficiaries realise the importance of the foods supplied and motivates them to produce and consume high quality protective foods. The school feeding programme and the Applied Nutrition Programmes are such education oriented programmes.

Problems Encountered :

In the feeding programmes which are currently in operation the organisers face numerous problems. They are :

Problems in administrations;

Problems in approach, in establishing rapport and interesting the community;
Problems in changing the dietary habits and in overcoming prejudices;
Problems concerning the personnel;
Problems in eliciting community support; and
Problems in coordination.

Problems in Administration:

For the success of feeding programmes, availability of protective foods at the time and place needed, must be assured through timely procurement, sanitary and organised distribution and maintenance of records. Against these minimum requirements, the picture obtained in the field is distressing as shown below.

While scientific suggestions are accepted by the administrators at higher levels and government orders to that effect are also passed, certain dissatisfactions such as low pay, lack of transport facilities and assistance, hinder the field workers from implementing the suggestions at the village level. For example, in our Applied Nutrition Blocks, the following very simple but effective suggestions were given.

Give eggs to children for three days in a week, instead of two days. Instead of giving a whole egg at one time, give half an egg everyday, as this will lead to uniform feeding on all days in a week; and facilitate better consumption of other foods such as milk.

These suggestions have not been implemented, because the preschool teacher felt that such a change would involve more work for her.

2. Some changes were suggested to the menus in an ANP feeding programme. With an additional expenditure of few paise per child, raw vegetables ready made cereal and pulse mixtures and seasonal fruits could be given along with the milk and eggs supplied to infants in the Applied Nutrition Progra-

mme. But the officials have not paid attention to make available the small funds necessary for such an important feeding. It is painful to note that in a million dollar programme like the ANP, feeding which is the crux of the programme, does not get the necessary money or attention.

3. In a preschool lunch programme, within the allotted expenditure ten paise per child per day, rice was predominant in the lunch with very little pulses and vegetables. When the preschool teachers were convincingly trained to modify the lunches to include more vegetables and millets in the place of rice, for three days in a week, the improvement could not be effected, due to the following problems: Purchase of food locally was not possible because of additional cost and the preschool teacher had neither time nor travelling allowance to go to fair price markets to purchase the provisions.

Problems in approach; establishing rapport and interesting the community.

Acceptance and utilisation of the assistance available by the rural people in these programmes have not been evidenced. Although there is an encouraging support from a section of the people, the organisers need to spend several hours frequently in getting the important members of the village together. The reasons for their reluctance to take action appear to be:

1. Lack of interest and indifference among village authorities and leaders towards any improvement in the village which would involve their cooperation. (Financial and otherwise).

2. Local politics and group quarrels which prevent any new programmes being implemented.

3. The village presidents and members are not invested with authority to implement the financial plans.

4. Non availability of extra grants for the innovations. Establishing and maintaining a feeding programme is a time consuming task. A minimum 10-15 visits, talks and discussions are needed to arouse the interests of an individual family, in the nutritional activities to be carried out. Nearly

one to three hours are spent in getting the women for a meeting in the women's club. A minimum of three hours per day are required from an extension worker to supervise the community feeding programme. Unless a nutrition extension worker is allotted entirely for nutrition activities, and is free to give this amount of time, the feeding programmes cannot be successful.

The village families have not yet been oriented and convinced about the nutritive value of foods. Their reasons for not sending their children to, or themselves attending, a feeding programme are:

1. The preschool teacher is paid by the government for that work. Therefore it is her duty to go to their homes and collect their children for the feeding activities.

2. They cannot spare the time to come and receive the supplements in the school.

Problems in changing the dietary habits and overcoming prejudices:

In establishing a feeding programme, the prevailing beliefs, fads and prejudices with regard to food need to be understood. Some of the beliefs and prejudices encountered among the rural families surveyed by our workers are :

1. Reconstitute skim milk is derived from the milk of donkeys and camels. Therefore it is not good for children.

2. Skim milk has a funny flavour and causes diarrhoea.

3. Eggs and milk consumed during pregnancy, will make the infant big and delivery difficult.

4. If nursing mothers consume eggs and milk, the infant will get diarrhoea and convulsions.

5. Unfertilized eggs are not wholesome and tasty. They are not good for health.

6. If food supplements are consumed in the presence of others in group feeding, they will not be digested and utilised by the body. and

7. It is not proper for mothers to eat anything which is not available to their husbands and children.

Problems concerning the personnel

All the workers at the village level do not plan and work together. Therefore dietary improvements suggested by nutrition extension workers are not followed up by the preschool teacher and others, who are in charge of feeding programmes.

As the salary of some workers is very low, any addition to the work load is resented and not justified. That is way, procuring and stocking foods such as millets, fruits or greens even when they are available free from the farmers, are not willingly undertaken by the pre school teachers. Their poverty often get them into trouble, specially, when they are sincere and honest, and do not move freely with the well to do or politicians. This is a great handicap for obtaining local participation and support.

Most pre and primary school teachers do not realise the need for keeping the milk powder and other foods, the equipment and store room clean and tidy. Cleanliness is not in anyway dependent on their salaries. The supervising personnel maintain different standards and yardsticks for the different categories of people. A nutrition extension worker at the grass root level with pasitive attitude towards the feeding programmes may be less respected, than a District officer in the same department, who visits the area for a mere inspection. Humanitarian feelings towards hungry children are often lacking in the field workers. On seeing such situations, the beginning young nutrition workers becomes charged with emotion, being not able to tolerate such standards.

Problems in eliciting community support

Neither the community, nor the administrators at the local level realise that it is wrong and harmful to deprive the children of their valuable food supplements, just for a little function in the village VIP's visit or meeting in the office

Therefore it is not possible to conduct feeding programmes regularly on all working days of the month. Mothers too have not yet realized that their own children are the beneficiaries. Therefore they do not come forward to render any assistance to the feeding programmes.

The situation is always different when an administrator or organiser is present on the spot. Then the programme runs smoothly. But it is not possible for the administrator or the organisers to be present in all the feeding centres all the time.

Problems in coordination :

Coordination is absent with regard to planning and execution and use of resources for feeding programmes. The transport facilities given for particular programmes like the ANP, are not always used for that purpose by the workers concerned. Therefore the workers suffer spending long hours in travelling using public transport, where they exist, and other means or walking, where they do not exist.

Although there is definite budget provision in the plans for feeding programmes, money is never given as advance. Therefore, the teachers or extension workers have to incur the expenditure from their own pocket. Submit bills and wait for reimbursement. How can teachers with meagre salaries advance money towards buying provisions? The result is purchases are made on credit basis, in small shops, where articles are high priced and may be adulterated. Malpractices may even be resorted to. These problems make feeding programmes fatiguing and frustrating for the organisers and conductors.

Problems encountered in School Lunch and ANP

Some problems which are encountered in the organisation of the school meal programme and Applied Nutrition Programme are:

1. Schools do not have kitchens and space to store the provisions. Lunches are cooked in school rooms, verandahs or open places and therefore the cooking areas are messy.

2. Sixty per cent of the funds for the programme come from state government, provided the remaining 40 per cent comes as local contribution. As the local contribution is often nil or meagre, the teachers go to the extent of producing false bills in order to claim the 60 per cent from the state government and keep the programme going on 6 paise per meal per child, instead of 10 paise per child per meal.

3. The entire burden of maintaining the school lunch programme is on the Headmaster. He does not get any guidance. There is no established procedures as to who should help, whether a helper can be employed and such. Village Panchayats (local governing body) which are in better financial position employ cooks or assistants. Other panchayats who are not in such a favourable position, do not have this facility. This lack of uniformity, causes much unpleasantness, among the headmasters and teachers. who always make comparison of the different situations.

4. Parents object to their children helping in the preparation of lunch missing the morning classes thereby.

5. Poverty of the families prevents children attending the school. Poverty deprives children of home lunch also.

Our research studies in the villages show that midday meals do not supplement home diets but act as substitutes for home lunches.

6. School gardens are not successful due to lack of water facilities, fencing and other drawbacks.

7. The CSM supplied by CARE is often infested with weavils, it is not possible to prevent the infestation by the simple means of storage available.

Besides the weevil infestations, the flavour and lack of cooking qualities of CSM are unacceptable in most schools. Therefore large quantities of CSM are thrown away.

8. The unsatisfactory condition of building, without locking arrangements lead to theft of the provisions meant for midday meals.

9. There is no nutrition education. The teachers themselves are not trained in simple facts of nutrition.

10. Those who are responsible for periodical evaluation are not interested in the qualitative improvement of the programme, but only in the statistical numerals and coverage.

11. As the programme is run only for the economically poor, children of backward classes are the major participants. Therefore, the programme instead of integrating the school community, accentuates the differences due to class and caste.

Suggested Solutions:

1. All the schools, and centres in charge of feeding programmes should be given the minimum facilities required, namely,

- (a) low cost building for feeding purposes
- (b) adequate kitchen and storage space
- (c) adequate equipment for cooking and service
- (d) adequate water
- (e) space and guidance for raising school gardens
- (f) assistance for cooking, serving and washing.

2. The parents should be required to pay a minimum amount towards the lunch, so that the stigma attached to poor feeding can be removed. The amount so collected can be utilised for the school lunch programme.

3. Parent and Teacher Associations must be formed. They must meet regularly to understand the progress of feeding programmes.

4. Teachers must be given training in nutrition education, which should include items such as balanced meals, standardized recipes, raising school gardens, and methods of teaching nutrition to children.

5. Before starting any feeding programme, a great deal of preparation for the donors organisers and receivers is necessary. Through meetings, film shows and competitions, the rural families must be informed and attracted towards the programme. Only by constant and repeated nutrition education programmes, their fads and fears can be removed.

6. Surveys should be conducted with the help of village president, block personnel and school teachers, in the beginning, middle and end of all feeding programmes.

7. Government should grant financial provisions in advance without delay.

8. Personnel in-charge of the programme should be given all assistance required and should not be disturbed for any other work, however, important it might be.

9. Nutrition education should be built in at all stages. It should precede, accompany and follow all feeding programmes.

Need for District Nutrition Officers :

Nutrition officers are necessary at the district level to be in charge of all the feeding programmes. They must help in coordination, imparting nutrition education, evaluation and improvement of the programmes.

The blocks with feeding programmes should have connections with the nearby educational institutions such as Agricultural Colleges, Home Science colleges and Veterinary Colleges. Adequate transportation facilities should be available to the personnel. Constant supervision and guidance would improve the feeding programmes.

Conclusion

In the light of what has been described in this paper, what happens at the ultimate village level in the rural areas, for whose benefit all the national programmes have been initiated with laudable objectives, huge plans, investments and foreign aid is clear. A new vision and drive are needed. Only then the feeding programmes will be really beneficial.

Chapter XVI

PROBLEMS IN FEEDING PROGRAMMES B. D. O.'s VIEWS

S. Jegatheesa Raghavan*

In Perianaickenpalayam Block, the following Feeding programmes are in operation.

- a. Applied Nutrition Programmes.
- b. School lunch Programmes.
- c. Milk feeding for pregnant women and lactating mother.

A. Applied Nutrition Programme

This programme has been in operation in this block from 1st April 1968. The programme is in implementation in all the 15 Panchayats of this block in one or the other. For example, Kitchen gardens and milk feeding are implemented in all the 15 panchayats, school garden in 7 panchayats covering 11 schools, Poultry programmes in 7 panchayats and community gardens in two panchayats.

1 Preschool feeding programme

The UNICEF supplies Skimmed milk powder to all Preschool children in this Block at the rate of 1 oz. per child per day. There are 15 Preschools in this Block with an average attendance of 30 children.

Eggs are being given to the children at present in 4 Preschools. 3 eggs per week where the institutions are running the units and 2 eggs per week where the individuals are running the units are supplied to each child.

*Block Development Officer, Perianaickenpalayam block, Coimbatore District, Tamil Nadu.

In respect of the feeding programme there is no problem regarding preparation and serving of milk and eggs except the low remuneration paid to the Balasevikas. This requires consideration by the seminar.

2. Nutrition Education for beneficiaries

Cooking demonstrations, preparation of new receipes, organising exhibitions, conducting cooking competitions, supply of equipment, conduct of training camps publications on Applied Nutrition programme are undertaken under this item. This is done in close coordination with and guidance from Sri-Avinashilingam Home Science College, Coimbatore.

No problems have been encountered on this score.

B. Schools Lunch Programme

In all the 54 Schools under the control of Perianaickenpalayam Union, School lunch is provided to 3400 children, which is roughly one third of the total children studying. The government is giving 6 paise per child and 4 paise has to be met from panchayat or public. Except two Panchayats, the rest of the communities are also not forthcoming to contribute their share. Hence the School teachers in such cases are managing to provide the lunch with the government share of 6 paise plus the CARE food materials supplied to them. Till the CARE continuous to supply, the problem of the lack of community participation will not be felt much. Anyhow, in the interest of the continuance of the school lunch programme on a self sufficient basis, the compulsory payment of the community share by the Panchayat may be considered by this seminar.

In three villages School lunch sheds have been put up and vessels have been supplied by the magnificent help extended by Sri. Ramakrishna Mission Vidyalayam and Sri. Avinashilingam Home Science College. The sheds help in proper storage of food commodities, hygenic cooking and serving. In the construction of these sheds no financial assistance has been given by either Applied Nutrition Programme or by the Panchayat Union. If a small provision is made, then a greater number

of such sheds may be put up with the assistance of the above institutions.

C. Milk feeding for pregnant woman & Nursing Mothers

Under this scheme milk powder is supplied through the Health officers to the Maternity and Child welfare centres in some selected villages. Out of 6 Maternity centres only 3 are receiving milk powder assistance from the UNICEF through Health Officers. It is suggested that atleast in Applied Nutrition Programme blocks all the Maternity centres may be included. Instead of supplying the milk powder through two agencies namely the block development officer and the District Health officer as it is in vogue to-day, it may be considered whether it is possible to route through the block development officer as is the case of milk powder supplied for Preschool feeding.

Chapter XVII

PROBLEMS IN FEEDING PROGRAMMES TEACHERS' VIEWS

K. Kulandaivel *

A survey was conducted recently in the elementary schools around Sri Ramakrishna Mission Vidyalaya in order to find out the problems encountered by the village teachers in organising the School Lunch Programme. The following views expressed by the teacher.

Children and parents like the School Lunch Programme and they want it to continue. Some children do not like the C. S. M. Some parents complain that C. S. M. contains weavils and it is injurious to health. Some parents say that the quantity of food supplied is inadequate and that the quality also has to be improved.

Teachers also welcome the school lunch programme. But they say that they have the following problems which stand in its effective implementation.

1) According to the scheme of Tamil Nadu School Lunch programme, the Tamil Nadu Government will give a grant of six paise per student, if another 4 paise per student is contributed by the local panchayat or the village people. People though, gave donations during the early years do not nowadays readily donate money for this purpose. Some panchayats contribute 4 paise per student and some contribute only 2 paise still some other panchayats do not contribute any amount. So where the four paise contribution is not forthcoming the teachers provide lunch worth only 6 paise, but write false account for 10 paise in order to get the government grant. Teachers feel that steps

* Principal, Sri Ramakrishna Mission Vidyalaya Teacher's College, Perianaickenpalayam.

should be taken by the government to compel all panchayats to contribute 4 paise per student and save them from the necessity of keeping false account.

2) The state government does not give advance grant promptly for running the school lunch programme. So the teachers have to get food materials on loan from the shopkeepers. It is not always possible to get them on loan. So the teachers have to stop the lunch programme for some days or months till they get grant. This in turn adversely affects the attendance in schools. All these can be avoided, if the government gives grant in advance.

3) The articles supplied by CARE are distributed to schools from a place which is 15 to 20 miles away. The teachers are not given any travelling allowance. Cartage also is not provided for bringing these articles to schools. There is a rule which says that these can be met only from the public donations and not from the government grant. So at place where public donations do not forthcome the teachers save one or two paise from the government grant, credit it as public donation and spend that amount for meeting the travelling allowance and cartage. This is false accounting. This can be avoided if the articles supplied by CARE are distributed at the Panchayat Union Office or at the teachers union centres where the teachers go to attend their union meetings every month.

4) Suitable store rooms are not provided in many schools. So the food materials are kept in the classrooms. Children often meddle with them. Further the rule says that the materials should be stored under the direct supervision of the headmaster. So there is a great need for providing the schools with good store rooms.

5) There are not suitable containers in schools to store the food materials. They are kept in packets, and so soon get spoilt. The CSM supplied by CARE gets spoilt very soon and is infested with weavils and worms. So suitable containers should be provided to schools to store the food materials.

6) Many teachers complain that as there is no one appointed in schools to prepare the lunch the teachers and students have to cook, serve and clean the vessels. This interferes with the academic work. So they want some part-time person like an Aaya to be appointed in each school who can look after the cooking and cleaning part of the work. In some schools there are no adequate vessels for cooking and serving. They should be provided to schools.

7) Some teachers complain that maintaining the account of the lunch programme is a great botheration to them. They want it to be taken away from them. Some of them want to have centralised cooking in central kitchens and to have the food distributed to the schools by vans. Thus, they point out, will solve most of their problems.

Though the central kitchens will solve many of the teachers' problems, they do not seem desirable in the long run for the following reasons:

- a) The food cooked from the central kitchen and supplied through vans may not be neat and hygienic. Dust and other impurities may enter the food during transportation. The vessels for distribution may not be well cleaned every day. If food cooked in one school gets spoilt, it affects the health of only a few children. But if the food supplied by the central kitchen gets spoilt, it affects the health of thousands of children.
- b) The food may not reach the schools in time everyday.
- c) The central kitchen has to be maintained by the government and the operating cost will be high. This has to be met entirely by the government and there may be no scope for panchayat or public contribution.
- d) The produce of the school garden should be utilised for the lunch programme. The village panchayats and people should be motivated to become responsible for the lunch programme of their children. All this cannot be done if central kitchen supplies the food.

- e) The Education Commission points out that work experience should be introduced in schools and colleges. Having school garden, cooking and serving school lunch, cleaning vessels, maintaining accounts for the lunch programme provide rich work experience which can be correlated well with the school curriculum. All this will be lost, if food is supplied from the central kitchen.

At present in almost all schools the school lunch programme is organised only as a feeding programme. Its potentiality as a source of meaningful and educational experience is not even thought of. Hence the teachers consider it as an irksome work thrust upon them. If the school lunch programme has to become a good success, the teachers should be made aware of the rich educational potentialities of the school garden and the school lunch. Further this must also be carried on in a spirit of experimentation. The children's height, weight and other health features should be measured once a month and studied to find out whether there is improvement in the health of the children under the lunch programme. When the teachers see that as a result of this programme, their children's health improves and they learn many new ideas, skills and attitudes, they are likely to take more interest in this programme than when they see it merely as a feeding programme for the poor. Hence the organisers of the lunch programme should convert it into a rich educational programme in which the students, the teachers and the village community can participate with pride and pleasure.

Chapter XVIII

PROBLEMS IN FEEDING PROGRAMMES, BENEFICIARIES VIEWS.

Mrs. Saloth Mary (A Parent)

My child participates in the school lunch programme conducted by Sri Avinashilingam Home Science College, Coimbatore. This programme promotes cordiality, tolerance and the sense of unity among children. In the Avinashilingam Basic School, there is provision for medical check-up of the children. In this institution mid-day feeding is conducted under ideal conditions under the guidance of the Home Science College. Such facilities may not be available in ordinary schools.

Mrs. Soundammal (Member of Mahila Mandal)

I am a member of the local, Mahila Mandal, Samichettipalayam in the ANP block of Perianaickenpalayam. The ANP has brought many benefits. The ANP feeding programme has helped in better physical and mental growth of the children who are now able to participate effectively in extra-curricular activities.

But the teachers usually find it difficult to carry out their responsibilities of the feeding programme along with their other duties. The parents in the village are aware of the details of the programme. However, they do not generally pay much attention to those aspects of bringing up the children which concern their physical and mental growth. The mukhya sevika and gramasevika in the village are engaged in propagating the preparation and preservation of commonly consumed foods. They also stress the need for consuming balanced diets. In the case of CSM, the children who consumed it were found to suffer from diarrhoea since it was not cooked properly and it was also infested with weevils.

Sri V. Padmanabhan [Headmaster of Samichettipalalam Panchayat Union Elementary School.]

The mid-day meals scheme has been in operation in Samichettipalayam School in Perianaickenpalayam Block from November, 1958. Only 80 children out of the total strength of 380 are at present benefitting by the scheme. The parents of the children of Samichettipalayam are engaged in the weaving profession. Only the lower income group are selected as beneficiaries in the programme. It is a condition in the programme that he or she should attend the classes regularly. Slates, books and clothes are also being given free of cost to the selected children. The following are the difficulties in the working of the scheme:

Much of the time of the staff members is spent for the preparation of the mid-day meals to the detriment of their studies. The headmaster also is adversely affected in the discharge of his regular duties as considerable time has to be spent for the successful operation of the scheme. The financial aid from the government does not reach the school in time with the result the running of the programme has become a problem.

It would be convenient if a kitchen is located in the same building as the school for running the programme effectively. Such a building has been made available to the school, since February 1970, through the good offices of Sri T. S. Avinashilingam Trust Institutions. There is need for a kitchen garden to supplement the supply of vegetables for the programme. The stocks of CSM are usually infested by weevils. If CSM and bulgar wheat are packed in small containers adequate enough to feed the children for a day, it would prevent the infestation which usually occurs when a part of the material is used from an opened packet. In order to make the CSM popular there is need for an intensive nutrition education programme. There is need for appointing a separate cook for the preparation of the mid-day meals, so that the food could be prepared well. The

government can also make available advance funds in the first month of each quarter for running the programme.

Sri R. Ramakrishnan [Headmaster of the Thirumalainai-ckenpalayam Panchayat Union Elementary School.]

In the initial stages, the programme evoked considerable public enthusiasm but it has since waned. Originally the public were willing to provide additional funds at the rate of 0.04 paise per head for the feeding expenses. Now they look to the panchayat to provide these funds. Some of the panchayats are paying 0.04 paise per head for the children fed, and some are reluctant to participate in the mid-day meals programme. Some of the panchayats are not providing any funds for the programme. Under the existing rules the teacher has to necessarily show an expenditure of 0.10 paise per head of the number of children fed in order to claim the government contribution of 0.06 paise. This forces many teachers to maintain false accounts.

Chapter XIX

FEEDING PROGRAMMES IN HARYANA

The Director of Public Instruction of Haryana

The nutritional feeding programme is being carried out by the Education Department in Schools under the ANP. and CARE schemes in Haryana.

The Applied Nutrition Programme

The "Applied Nutrition Programme" is a multifaceted programme which is administred by the development department and is being implemented through various departments like health, agriculture, fisheries and education.

The education department is concerned with the raising of school gardens in the selected primary, middle and high schools, where adequate land and irrigation facilities are available. Pump sets, modern implements, sprayers, fertilizers, fruit and vegetables seeds etc. are provided by UNICEF as free gifts.

The raising of school gardens under the ANP aims at providing manifold benefits as detailed below:—

- 1) to educate the pupils in the principles of modern techniques in agriculture and horticulture.
- 2) to produce nutritious vegetables and fruits in order to make useful contributions to the school meals programme.
- 3) to make the pupils aware of the nutritional values of the vegetables and fruits which are grown in the gardens.
- 4) to help pupils develop self confidence and to introduce to them the pleasures of meaningful activity.

At present ANP programme is in operation in 13 development blocks (i. e. 17 educational blocks.) Three more

development blocks are to be included in 1970-71. One hundred and forty school gardens have been raised in the schools and are managed by the school children under the guidance of a teacher, trained in gardening and under the supervision of the agricultural and horticultural staff of the block development and panchayat office. To enable the teachers understand modern techniques of gardening, in service training is arranged in the Agriculture University, Hissar. This year 85 teachers have been trained. The school gardens are regarded as the children's garden for the benefit of the children.

Rs. 34,000/- per block has been sanctioned for eight development blocks by the Development Department. No separate provision is fixed for school gardens. The education Department has been providing Rs. 7,500/- for irrigation purposes from its own funds for the last three years.

The Vigjan Mandir Officer-cum-Deputy Inspector of Schools Nilokheri (Karnal) is the inspecting officer in the field. He has to inspect the schools under A. N. P. and agricultural farms. Deputy director of Schools is entrusted with this work at the Headquarters for this programme. An officer at the district headquarters is also made responsible for the programme.

CARE school feeding programme

Scheme for the free distribution of milk to Primary school children was introduced in the composite Punjab in the beginning of 1962 in collaboration with CARE organisation. After the Reorganisation of the State, it is being operated in 81 educational blocks in Haryana State. Under this scheme only milk powder was supplied upto 1966-67 and afterwards it has been substituted by a high protein blend food called CSM and salad oil. These commodities are distributed through the state government under the supervision and overall control of the block education officer concerned.

The details of number of pupils benefited, commodities supplied by CARE, financial provision and expenditure for the last years pertaining to Haryana State since the state came into existence in 1-11-1966.

Number of Beneficiaries

1966 - 67	200,000
1967 - 68	250,000
1968 - 69	300,000
1969 - 70	325,000

Quantities of food supplied

The quantities of food supplied by CARE and received by B. D. O./ D. E. Os.

	Year	Quantity (lbs.)	Value (Rs.)	Commodity
a)	1967 - 68	425,000	361250.00	C. S. M.
	1968 - 69	2138,350	1,817597 50	
	1969 - 70	3502,000	2,976700.00	
b)	1967 - 68	148,094.1	259,164.70	Salad oil
	1968 - 69	502,794.6	879,890 50	
	1969 - 70	900,022.2	1575,038.85	
c)	1967	267,300	534,603	Milk powder

Expenditure

Year	Provision	Expenditure
1966 - 67	Rs. 2-00 Lakhs (from 1-11-66 to 31-3-67)	Rs. 5303-00
1967 - 68	Rs. 6-00 Lakhs	Rs. 4,86098-00
1968 - 69	Rs. 6-50 Lakhs	Rs. 5,72492-00
1969 - 70	Rs. 10-00 Lakhs	about 9 Lakhs

From CSM and salad Oil mathis, panjerries, pakoras, halwa etc. are being prepared and served to the children.

Problems

1) The main difficulty is that the cooking process is time consuming and cooks cannot be appointed for every school in the state. The best solution of this difficulty would be that biscuits, namkin, kasta, Sev etc. be got prepared and distributed to the children during mid-day meals.

2) We should not depend on foreign food assistance on permanent basis but resort to indigenous food such as BALAHAR.

3) The storage efficiency of CSM is said to be six months which is a very short period. Further research is needed to increase its storage efficiency.

4) The objective sought to be achieved by the mid day meals scheme can best be achieved if the supplementary feeding programme under the Applied Nutrition Programme and allied Programmes like CARE Milk Feeding are fully integrated.

Chapter XX

THE NUTRITIONAL FEEDING PROGRAMMES IN KERALA

The Applied Nutrition Programme:

Under this programme supplementary educational feeding of preschool children expectant and nursing mothers of the vulnerable group is in operation in selected 35 blocks out of 144 blocks in the state. Feeding is done in 1,100 feeding centres in all, under the auspices of local mahila samajams. The UNICEF has been supplying skim milk powder free of cost for the feeding at the rate of 45 g. per beneficiary per day for 22 days in a month. Consequent on the policy decision taken by the UNICEF to discontinue the supply of skim milk, CARE, Kerala has undertaken the free supply to Corn Soya Milk for the feeding programme at the rate of 60 g. per beneficiary per day for 22 days in a month, from the 1st December 1969, and feeding is conducted in all the centres. The total number of beneficiaries is 1,20,000 (approximately) and the annual requirement of Corn Soya Milk for the feeding programme is 39,00 000 Pounds approximately.

The programme is being extended to more and more blocks year after year. Eight more blocks have been selected recently and feeding programme will be introduced in these blocks in about two or three months. The Government of India have tentatively allowed the extension of the programme to 40 blocks in the state during the Fourth Plan period, i. e. 1969-74.

Besides the supply of milk, fish distribution is carried out on two days a week. Egg is supplied to the beneficiaries almost once a week.

The Programme is being implemented through the agency of community development blocks. The mukhya-sevika and grama sevikas of the block play an important role in the feeding programme. At the state level, the officials of the development department viz. the development commissioner and the assistant development commissioner (Applied Nutrition) exercise control and supervision over the feeding programme. The Project Nutrition Officer of the health department is also attached to this programme, and he renders technical assistance to this Programme. At the regional level, there are three regional women's welfare officers (Nutrition) to supervise the feeding programme.

Composite Programme for Women and Preschool Children

Under this programme, demonstration feeding with locally available food materials is being implemented in eleven centres in eleven selected Blocks where the Applied Nutrition Programme is not in operation. These centres are attached to Balwadis and the services provided by them include (1) Supplementary feeding of thirty expectant and nursing mothers with children in the age group of six months (2) Nutrition supplements once a day for twenty children in the age of six months to two years, and (3) Nutrition Supplements once a day for 30 children in the age group of 2-5 years.

The demonstration feeding under this programme is conducted on 25 days in a month, and the beneficiaries are selected from the weaker sections of the community.

The Programme is being implemented through the agency of the community development blocks. The block development officer and the mukhya-sevika of the block and local mahilasamajams play important roles.

CARE Feeding Programme in Schools:

This programme is in operation in the lower primary schools in the state. Noon feeding of school children is carried on with the cooperation and assistance of the CARE.

Chapter XXI

FEEDING PROGRAMME IN MADHYA PRADESH

Under the Applied Nutrition Programme in Madhya Pradesh, at present 61 extension departments are functioning. For every extension department twenty five villages have been selected. women's association and youths' association have been organised in every village. Distribution of nutritious food among the weak and school-going children in the villages has been entrusted with the women's associations.

For the distribution of nutritious food, the following benefits have been granted by the government:

- a) A grant of Rs. 1,000/- is granted for ten women's associations of every extension department, towards equipments and other expenses.
- b) Every year an amount of Rs. 250/- is sanctioned by the government to ten women's associations of every Extension department planning and the arrangement of exhibition and distributing nutritious food.
- c) In addition to this, every village panchayat has been ordered that it can sanction an amount of Rs. 200/- to Rs. 400/- every year in the budget towards feeding programme and functioning of the women's associations.
- d) For the maintenance of nutrition programme, one grama lakshmi is posted in every women's association with an honorarium of Rs. 25/- per month.
- e) Monthly Programme is prepared for the efficient functioning of the scheme. To create interest in the scheme, various programmes are broadcast over the radio pertaining to the feeding programme.

Under the Nutrition programme, twenty to Thirty small children, 10 pregnant and all the children studying in the women first standard in every village, are fed through bal mandir, women's association and primary schools respectively.

Cooperation is sought from panchayats, social service league and voluntary corps, for the Feeding programme. In addition, the co-operation of the Agricultural Development officers, members of the panchayats, school masters and members of the women and youths associations, is sought.

Problems

The following difficulties are experienced in running the feeding programme.

1. Food materials supplied organisation are not received by the departments under the feeding programme. Hence some other arrangements are necessary.
2. More attention is needed to propagate and develop this feeding programme.
3. Appointment of a women officer for every district is necessary Grant can be sanctioned to construct buildings for the women's associations.

Fourth Plan

In the Fourth Plan, 80 lakhs of rupees have been sanctioned towards the feeding programme.

Chapter XXII

SCHOOL FEEDING PROGRAMME IN MAHARASHTRA STATE

Special officer, school feeding programme educational and social welfare department, Government of Maharashtra was in charge of distribution of milk supplied by UNICEF free of cost to the children in certain selected primary schools, mostly situated in scheduled areas and community development blocks. The cost of transport of the milk powder from the port to the centres and the cost of distribution milk was borne by the State government. The total number of beneficiaries was approximately 60,000.

The programme was initially supervised by the officers of the public health department and later by the education department. The UNICEF decided to discontinue the supply of milk powder from June 1965. The Government of Maharashtra, therefore, decided to continue the programme with the assistance of the CARE, India done at the instance of the Government of India. The programme was restricted to the old centres under the UNICEF skim milk powder scheme. This arrangement continued till 1967-68.

From January 1968 onwards the old scheme for the supply of milk was received with CSM on children in selected primary schools Under this scheme, "Food Commodities" are supplied to about 1.50 lakhs children in primary schools in the Poona, Thana and Nagpur Districts by the CARE, free of cost. The cost of transport of these articles from the port to the centres and other expenses are borne by the Government of Maharashtra. The Expenditure for this programme per annum is estimated as Rs. 10.53 lakhs as detailed below :

Administrative cost paid to CARE

For the year 1968 - 69	Rs. 5,78,000 00
For the year 1969 - 70	Rs. 3,86,000 00
Cost of transport	Rs. 2,25,000 00
Cost of stove, utensils etc., at Rs. 100/- per school	Rs. <u>2,50,000 00</u>
	Rs. <u>14,39,000 00</u>

government has extended this scheme to about 50,000 children in pre-primary schools. In addition, peanuts are supplied to children in primary schools in Haveli Block of Junnar Taluka in Poona District at a cost of Rs. 1.86 lakhs. Thus the total annual cost of the school feeding programme in the State of Maharashtra is approximately Rs. 12 lakhs per annum.

Problems and suggestions:

Transport of Food

1. At present the foodstuffs are transported directly from the port to head quarters of block development Officers and then to the schools. The work of transporting food stuffs is entrusted by government to a contractor. There is therefore, loss or damage to the foodstuffs in transit. The responsibilities for loss or damage in transit lies on the contractor.

Storage:

2. There are no godowns or storage facilities either at the block level or at the school level for the storage of the food commodities. Storage facilities at Block and school level are considered essential but government can hardly afford to provide them for want of funds. Steps are however being taken by the Block Development officers to despatch food stocks speedily to the centres. Centres are expected to exhaust these stocks within the given time limit.

3. Coverage:

It is desirable to consider the needs of backward areas and scheduled areas whose needs for nutritious

diets are greater. To operate the programme in Backward areas administrative and practical difficulties such as

- a) The areas are inaccessible and so to transport of foodstuffs is expensive.
- b) Accounting is difficult as only the teacher might be a literate one. There may be plenty of scope for misappropriation or misuse the food articles without detection. It may not be possible for the teacher also to maintain the accounts properly. Most of the schools in backward areas are single teacher schools. The number of pupils therein is very small, even below average. To select such small schools for school feeding programme will be more expensive.

The education department has already decided tentatively to cover Aurangabad District and one Block each in the other divisions in the Fourth Five Year Plan. The problem of selecting backward areas for the school Feeding Programme for future expansion does not therefore arise in the State.

5. Community Participation

Local participation in the programme could be ensured only after educating the local community Public opinion and creating an urge for nutritious protective diets and midday meals for children. A sense of responsibility in this direction should be developed, in general, in the local community. This could be done with advantage through the zilla Parishads panchayat samities and Gram Panchayats.

6. Staff Pattern

The Government of Maharashtra has appointed an Officer-in-M, E. S. Cls. II as officer for the school feeding programme and he is assisted by a clerk in his work. He maintains liaison between the government and CARE on the one hand, and between the

CARE and the D. E. and other officials at the Zilla and block levels. The normal supervisory work of the Programme is at present done by the Unit Officers of the CARE and Inspecting Officers of the zilla parishads. The Inspecting Officers of the zilla parishads have their hands full and they can hardly devote much time to the supervision and inspection of the programme.

It is necessary to strengthen the supervisory staff if the programme is to be implemented on proper lines.

In Maharashtra State, teachers are expected to prepare the meal and to serve the same to the children with the cooperation of the colleagues, local people, and the children. This consumes a lot of their valuable time of the teacher and affects his school work. It is necessary to provide either part time or full time cooks, if funds permit. The village panchayats or other organisation at the village level may provide for the cooks. The later alternative is remote.

7. Coverage of Preschool Children

To cover preschool children under the food programme, there are several administrative and practical difficulties. In the first place, it will be necessary to engage some part time employees to bring the preschooler to attend the feeding programme at the fixed hours atleast in the initial stages till the preschoolers are fully accustomed with the programme and attend the meals regularly. Secondly the teacher will have to maintain a separate register of preschoolers whose number may vary from day to day. This would involve additional work for the teacher. There will be considerable scope to manipulate this number and to misappropriate or misuse the food articles. It would be difficult for the supervisory staff to check this.

Much of the valuable time of the teacher will be consumed in preparing and serving the meals to the preschoolers and the school work will suffer.

Chapter XXIII

NUTRITIONAL FEEDING IN RAJASTHAN

❖ **Randhir Singh Chowdhari**

The programme of nutritional feeding in Rajasthan is sponsored by two international agencies (viz.) CARE and UNICEF. CARE confines the nutritional feeding programme to the school going children whereas the UNICEF Nutritional feeding is extended to Preschool children, expectant and nursing mothers along with the school children.

I. CARE Feeding Programme

CARE School feeding programme in Rajasthan came into existence on 14th November, 1962 and was administered by the education department. In the first instance, it catered for one third of the children in all the primary schools rural areas. Later on, it was extended to feed cent percent children of all the schools in the rural areas.

In the year 1963, the administration of CARE feeding Programme was transferred to the development department on administrative grounds. It continues to be with the development department upto this date. However, an officer of the rank of inspector of schools, designated as assistant director CARE school feeding programme, drawn from the education department, is put under the administrative control of the development department to look after this programme. The funds to operate this programme are provided from the education head and placed at the disposal of the development department.

❖ **Additional Development Commissioner, Panchayat and development Department, Rajasthan.**

In the year 1967, a review was made in respect of the implementation of this programme.

Problems and suggestion :

I Lack of funds for:

- a) Storage at district level.
- b) Storage at panchayat samiti level.
- c) Distribution by the panchayat samiti Schools.
- d) Provision of utensils.
- e) Provision of fuel and
- f) Provision of cooks.

In order to overcome these problems, the following steps are taken:

- i) Bulk consignments of food is sent from port to District headquarters.
- ii) The deputy district development officer is made over all incharge of the programme in his district.
- iii) The deputy district development officer is financed to manage free despatch of commodities by truck every three months to the blocks.
- iv) Storage is provided by the State Central Warehousing Corporation for which funds have been allotted to the deputy district development officers.
- v) The Vikas Adhikaries are provided with funds to supply the commodities at the school doors.
- vi) The programme was consolidated and a fresh selection of 45 blocks was made. This was done while replacing CARE milk with CSM and Oil for feeding the school children. In the current year, 70 blocks are covered under the programme and number of beneficiaries will be two lakhs approximately.

2) The headmasters feel that the management of the programme takes them away from their teaching duties.

3) Constant lengthy interruptions in feeding because of lack of for delivery of goods facilities.

4) **Damage and Losses:** The damages and losses are classified under three major heads:—

- a) Losses during transit from port to rail head.
- b) Defective packing. and
- c) Defective storage.

From experience, we can say that railways have been most indifferent in discharging the duty related to this programme. Most of the losses occur in rail transits for which entries are invariably made by the consignee in the station delivery book and claims filed with the Commercial superintendent, railways. Unfortunately, the railways hardly ever pay for the claims made against all such losses. Invariably a reply is received from them saying that the claim is rejected on the ground that the loading and unloading of the CARE commodities are not done under railway supervision.

This must be looked into seriously. We have been negotiating with the railway authorities, R. D. F. Bombay and others in this regard for the last few years but nothing fruitful has come out so far.

In order to overcome this difficulty it is suggested that :

- i) The centre should bear all such claims connected with the railways. States cannot afford to stand the losses.
- ii) The concerned railway officers should certify any loss or shortage detected and pointed out by the consignee while giving / taking delivery of the consignment. This will ensure safety against any misappropriation of the commodity which may take place otherwise.
- iii) As for the damages occurring on account of faulty or poor packing, the ministry could negotiate with the CARE organisation to make an improvement upon this factor.

While the contribution of CARE for raising the nutritional standards of the school going children is notable, the question is how long will such dependence on imported food continue? We have to be self sufficient in providing food supplements to the vulnerable groups of society. One vital point which follows is whether it is economical for us considering the total requirements on our limited resources, to undertake the mid-day meals programme on our own and continue it at the same level of operation.

A closer study of the economics of child nutrition programme would reveal that the money spent on effective programme of improved child nutrition are indeed economical. A project like child nutrition programme implemented through a mid-day meal programme is definitely economical, when viewed particularly in terms of bringing out more intelligent and efficient people, less absenteeism from work and less cost on medical and health benefits.

One realistic approach that might be taken to accomplish this end would be to allocate higher priority to the programme and along with it, greater financial resources too, so that the programme could be put on an increasingly greater indigenous footing. It is definitely possible to undertake such an approach. A beginning is already under way with the production of Balahar which contains only foreign protein inputs and indigenous base products. Such a programme could be stepped up to a larger scale, provided that the production problems encountered currently are overcome. Only then, the supply to the programme could be guaranteed. On the other hand, it would not be advisable to attempt to switch from a largely foreign assisted programme to a totally indigenous base. A phased programme must be undertaken to ensure that the current level of coverage is maintained while planning for the indigenous base.

This could definitely demand a special administration but this is not unrealistic as some of the essential machinery is already established and that would need adaptation only. To be more specific, Food Corporation of India could procure food stuffs for the programme. The state or central warehousing corporation is already providing storage. The machinery at the

block and school levels, is already well established. The government will have to be actively involved in the allotment of commodities. A greater priority for the child Nutrition Programme would thus mean a larger administration priority.

II UNICEF-Applied Nutrition Programme in Rajasthan

The programme of the Applied Nutrition was initiated in Rajasthan under the subsidiary plan of operation No. 12 of the Master plan of operations in India in the year 1965-66. Eleven Training Institutions and 12 community development blocks were taken up in the year 1966-67 the programme was extended to five more blocks in the tribal area.

In the year 1967-68, special Applied Nutrition Programme was launched in 10 chronic scarcity affected blocks. Two blocks were taken up in the year 1968-69 and two more in 1969-70. Thus the Applied Nutrition Programme (including S. A. N. P.) is in operation in 31 blocks in this State.

I. Administration

The development commissioner is responsible for the administration of the Applied Nutrition Programme. The director of training is the ex-officio Project Director, who coordinates with the departments of agriculture, animal husbandry, medical and health education, community development and social welfare, in the implementation of the various activities relating to the Applied Nutrition Programme. He is assisted by an Assistant Director (Lady) in the supervision of the activities under Applied Nutrition Programme in general and feeding programmes in particular. At the state level, a Coordination committee has been constituted. The collector assisted by the deputy district development officer is responsible for the programme at the District level. The standing committee of zila Parishads look after the coordination at that level. A special coordination committee has been constituted in each block for the administration of the programme in the area. At the village level gram panchayats are responsible for the implementation of the programme.

2. Nutrition Education

Nutrition has been included in the syllabi for training of teachers, gramsevakas, extension officers, block development officers, medical officers and other health workers. Almost all the institutions have conducted training programmes. So far training has been imparted to 3970 officials and non officials connected with the Applied Nutrition programme. Nutrition education is being imparted to the villagers by organising peripatetic parties of the Panchayati Raj Training Centres.

3. Programme activities and achievements

Activities relating to the Applied Nutrition Programme have been in action in 1249 villages. The progress is as below:-

a) Horticulture

i) A. N. P.

a) Home Gardens	...	13069
b) School Gardens	...	762
c) Community Gardens	...	214

ii) S. A. N. P.

a) Home Gardens	...	2994
b) School Gardens	...	187
c) Community Gardens	...	198

Regional vegetable seed production farms have been developed at

- 1 - Durgapur.
- 2 - Sriganganagar.
- 3 - Sadri.
- 4 - Bhilwara.
- 5 - Banswara.
- 6 - Kota.

b) Poultry

- i) Number of Block Poultry Farms established - 22
- ii) Number of Private Poultry Keepers assisted - 168

The regional poultry farms at Ajmer, Jaipur, Jodhpur have been strengthened.

c) Fisheries

Due to lack of perennial tanks, pisciculture project has been taken up only in seven blocks. The number of tanks developed in Applied Nutrition Programme blocks is 20. A state fish farm at Udaipur has also been developed.

d) Feeding Programmes

Feeding programmes has been started in a regular manner in all the blocks except the four blocks of the year 1968-69 and 1969-70 series.

e) Funds

According to the pattern suggested by the Ministry of Food, agriculture, community development and corporation, Government of India, the funds provided to the blocks per year are:

Horticulture	Rs 11,00,000/-
Irrigation	Rs. 12,00,000/-
Poultry	Rs. 14,00,000/-
Fish	Rs. 14,00,000/-
Central and State Adhoc assistance	Rs. 34,00,000/-

The community development department bears also the cost of salaries of the following block level workers and maintainance of vehicles:

1) Lady Nutrition Officer	—	1
2) Lady Gram Sevikas	—	2
3) Driver	—	1

f) Expenditure :

Table I and II gives the expenditure incurred in the last five years.

Table I

APPLIED NUTRITION PROGRAMME EXPENDITURE INCURRED IN THE LAST FIVE YEARS.

Year	Community Development	Agriculture	Animal Husbandry
1966-67	5.00 lakhs	1.71 lakhs	0.45 lakhs

1967-68	9.18 lakhs	1.49 lakhs	2.50 lakhs
1968-69	9.18 lakhs	5.16 lakhs	4.10 lakhs
1969-70	9.86 lakhs	2.92 lakhs	3.38 lakhs
Number of People benefitted:		School Children and	
		Pre-school children ...	813484
		Expectant and nursing	
		mothers ...	29779

Provision in IV Plan for continuing the schemes: C. D. Rs. 29.92 Lakhs

Provision under agriculture and animal husbandry heads are not readily available. Not available.

Table II

Expenditure incurred in the last five years on care school feeding programme

Year	Plan budget	Non Plan budget	Total
1964-65	8,00,000/-	—	8,00,000/-
1965-66	—	8,25,000/-	8,25,000/-
1966-67	—	6,30,000/-	6,30,000/-
1967-68	—	6,50,000/-	6,50,000/-
1968-69	—	7,00,000/-	7,00,000/-
Total			36,05,000/-

Table III gives Provision in IV Plan for continuing the scheme:

Table III

1969-74	55,00000	424000	975000
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g) Beneficiaries

1964-65	... 10 lakhs.
1965-66	... 11 lakhs.
1966-67	... 6 lakhs.
1967-68	... 6 lakhs.
1968-69	... 2 lakhs. (This includes expectant and nursing mothers of famine area)
1969-70	... 2 lakhs.
1969-70	(Emergency feeding) 1.75 lakhs.

CARE has undertaken emergency feeding programme in the famine affected districts of Rajasthan last year. The beneficiaries of

emergency feeding comprise of expectant and lactating mothers, preschool and school going children.

h) Problems :

The problems encountered in the programme are of such nature that the solution needs to be found only locally. The main problems are:

- i) Allotment of land for school gardens. Most of the schools in Rajasthan do not have sufficient land to develop as school gardens. Efforts are made to get the land allotted by the revenue department. It does take sometime.
- ii) Rajasthan has been in the grip of severe famine since last several years. As such, water available for irrigation of the school/community gardens is not sufficient. This is a great hindrance in the progress of horticulture activities.
- iii) Nearly 80% of the woman folk in the rural area of this state are occupied in the agricultural operations. This makes it difficult to draw them closer to the feeding aspect of the programme which is envisaged to take place through the mahila mandals.
- iv) Changing the food habits is a slow process.

Chapter XXIV

FEEDING PROGRAMMES IN WEST BENGAL.

Bhattacharji *

A. Under the Education Department

The three main feeding programmes in West Bengal are

1. Government of West Bengal-CARE Programme in the City of Calcutta.
2. Government of West Bengal - CARE child nutrition programme in the districts.
3. Feed the Children Aid Programme run through CASA by the Protestant churches of West Germany. Programmes. (1) and (3) are financed and run by the education department (2) is sponsored and financed by the relief and social welfare department. The implementation is however made by the education department.

a. Expenditure incurred and people concerned in the last five years:

1. City Programme:

Year	Amount spent:	Number of people benefitted
1964-65 ...	Rs. 1,16,113.97	
1965-66 ...	Rs. 3,15,900.08	
1966-67 ...	Rs. 1,94,633.01	
1967-68 ...	Rs. 5,12,660.28	1,04,000
1968-69 ...	Rs. 8,53,353.51	
(Budget estimate) 1969-70 ...	Rs. 14,50,000.00	

2. Government of West Bengal - CARE Child Nutrition Programme in the districts

1967-68	... Rs. 9,67,905 00	} 2,00,000
1968-69	... Rs. 26,40,600.00	
1969-70	... Rs. 30,00,000.00	

*Deputy Secretary, Government of West Bengal.

3. Feed the Children Aid Programme:

			No. of
1966-67	Rs.	1,08,000.00	beneficiaries
1967-68	Rs.	1,01,000.00	
1968-69	Rs.	1,50,000.00	10,00,00
1969-70	Rs.	1,50,000.00	

In addition to these main schemes the state government runs several other schemes covering approximately 50,000 children. The main among these is the state scheme for junior and senior Basic Schools, which serves 120 schools with an enrolment of 150 students on an average. Snacks only are supplied under this scheme. The per capita cost is 17 ps. per day of which 6 ps. is contributed by community and 11 ps. by the state government.

Provision made in the IV Plan for continuing the scheme:

The state government wishes not only to continue but to expand the programme. The present target fixed for the City Programme is 2 lakhs, for the District programme 30 lakhs and for the Feed the Children Aid Programme 2 lakhs. It is not possible however to quote the financial provisions in the fourth plan since this has not been finalised yet.

These are mainly primary stage children including some preschool children and a few nursing and expectant mothers under the district programme.

In 1968-69, 19,00,000 children were covered under the District Programme.

In 1969-70, the number has been reduced to 10,00,000 for lack of funds.

b. Agencies and personnel involved:

1. Foreign Agencies:

- i CARE (Co-operative for American Relief Everywhere).
- ii The Protestant Churches of West Germany through CASA (Christian Agency for Social Action).

2. Local Agencies

- iii Education and Relief & Social Welfare Departments

of the state government.

Apart from the personnel engaged by the foreign agencies, the state government utilises the following personnel for running the programme:

3. City Programme:

One Special Officer.

Two senior technical assistants.

Five junior technical assistants.

One u. d. Clerk.

One accountant.

One storekeeper:

One l. d. Clerk.

One steno-typist.

One typist

One driver

One record supplier

Seven servants (2 office peons, 3 orderly peons, 1 night guard and 1 durwan, one part-time cleaner).

4 District Programme;

14 Assistant. Inspector of Schools under the District Inspector of schools.

20 school meal officers.

18 clerk-cum-typist.

14 peons.

The number of school meal officers was 30 when the district programme covered 19 lakhs beneficiaries in 1968-'69.

5. Feed the Children Aid Programme:

2 nutrition officers and

2 Assistant. nutrition officers,

6 Drivers (4 Trucks and 2 Jeeps)

2 Peons

The deputy director of public Instruction (Women's Education) is in overall charge of the three feeding programmes. The Assistant. Inspector and sub inspectors in all districts share the responsibility of running

the programmes. The main responsibility for implementing the scheme lies with the teachers of the schools concerned. They take charge of the storage, processing and distribution of food. Sometimes local hands are recruited for the cooking of the food stuffs. These are in many cases volunteers. Community participation in general supervision, implementation of the scheme and its improvement is gradually taking root.

c. Achievements

In general, the results of the school meal schemes have been

- 1) An overall improvement of physical condition.
- 2) 30 to 50 percent increase in enrolment and
- 3) A uniform improvement in school attendance.
- 4) Children even in drought affected areas have built up muscular bodies

In almost all cases the teachers are feeling that the pupils are improving their mental alertness and maintaining the same throughout the day.

d. Problems

The problems are mostly financial. In case of the City Programme where either a quarter liter bottle of milk and 60g. of plain bread or milk bread containing 19 grams of milk powder are issued to each child, the cost is about 13 rupees per capita per annum.

In the districts where the food consists of either a porridge of 60g. of Bulgar wheat and 45g. of C. S. M. or a Khichuri mixed with vegetables the cost is Rs. 3/- per capita per annum. Under the Feed the Children Aid Programme the cost per capita per annum is less than one rupee, where the foreign agency supplies rice, dal and cooking oil and the community supplies vegetables. Even so, it is difficult to collect the money necessary for feeding the required number of primary stage children which should be 2 lakhs in the city and at

least 30 lakhs in the districts. The school meal is very much in demand and can easily be expanded if funds could be made available. (2) Storage and transport of food is also a problem and this leads to loss of food unless skilled labour and improved conditions of transport are made available. The food supplied under all those three programmes are substantial but still they have to be improved, to supply a complete diet to the children. Addition of MPF, vegetables, fruits may be the answers. Above all we shall have to make an attempt for gradually making the school meal scheme a completely indigenous affair. This can only be possible when India gains complete self sufficiency in food.

e) Suggestions for future

The ideas for improvement are mainly centred round the improvement of the storage, godowns, transport, and provision of community kitchens as far as possible. The provision of more balanced food is also considered essential.

B. Feeding programme under the Health Department

1. Agencies :

- a. Maternity and Child Health Scheme — Long range feeding programme, so far run with the assistance of UNICEF.

Expenditure-UNICEF Skim milk Feeding Programme.

Period	Pay allowance etc., of Officer and Staff (including the staff in the districts)	Contingent expenditure	Total
1965—66	89,945 38	19,177.74	1,08,223.12
1966—67	84,807.15	19,343.28	1,04,151.43
1967—68	99,010 90	8,018.84	1,07,029.74
1968—69	1,03,002.35	13,992.82	1,16,995.17
1969—70	98,803.35	6,551.20	1,05,361.55

Number covered Mother expectant and Nursing 18650
children 41,900. (upto Dec. '69)

- b) Distribution is made through both governmental and non-governmental voluntary organisations. In government Channel the Chief Medical Officers of Health, of the districts distribute milk through the primary health centres and district and Sub-divisional hospitals. The All India Institute of Hygiene and Public Health also distributes Milk Powder through some centres under them.

In non-governmental channel the following voluntary organisations distribute skim milk through their Feeding Centres.

- i Ramakrishna Mission, Janasiksha Manira, Belurmath.
- ii Ramakrishna Mission Ashrama, Narendrapur.
- iii Indian Red Cross Society, West Bengal State Branch, Calcutta.
- iv West Bengal Council for Child Welfare, Calcutta.
- v Sree Ramakrishna Sevayatan, Baranagore.
- vi Sri Ramakrishna Matrimangal Pratisthan, Ariadah.
- vii Shri Ramakrishna Ashram, Nimpith, Joynagar.
- viii Sri Ramakrishna Ananda Ashram, Bob-hooghly.
- ix Sri Ramakrishna Ananda Ashram, Naktola, Jallygunj.

There are altogether 502 feeding centres, 220 being in the government channel and 282 under the voluntary organisations.

2. Personnel – There are no separate salaried personnel at the distribution point, distribution in the government channel is made through the family planning welfare centres attached to the district and sub-divisional hospital and primary Health Centres.

Voluntary organisations make distribution through local clubs, and organisations. Some grant in aid is sanctioned by the Government of West Bengal to the voluntary organisations for maintenance of staff. Transport charges for carrying milk powder from the Central

godown to the respective godowns of the organisations are also met by the state government.

However the following members of staff are maintained by the state government for continuance and supervision of the programme.

Head-quarters — 1)	gazetted officer	...	1
2)	inspectors	...	2
3)	u. d. assistants	...	2
4)	l. d. Clerks	...	3

Districts — Accountants Clerk — 15 (1 for each Dist.)

3. Problems :

- i The programme is run satisfactorily so far. The main problem encountered is that, the feeding centres sometimes went without food which was due to delayed receipt of skim milk powder from UNICEF.
- ii The Programme continued from year to year agreement (with UNICEF) basis. As such, no special provision was made for continuance of the programme during the Fourth Plan period.

Furthermore, UNICEF has already given us notice about their withdrawal from this field of activity and negotiations are being made by Government of India for continuance of the programme in the state through the aid of CARE.

As negotiations with CARE have not yet been finalised and everything is still in a fluid stage, no suggestions could be given.

C. Feeding Programme under the Applied Nutrition Programme

- a. Feeding programme in operation in this State — There is one feeding Programme under ANP.

The major food production aspects of the Applied Nutrition Programme are as follows :

1. Poultry and egg production
2. Horticulture
3. Pisciculture

Educational demonstration feeding programme under the Applied Nutrition programme is to encourage the additional consumption of protective food, of the above categories by preschool, school children, and by expectant and nursing mothers by means of demonstration of feeding schemes.

- b. **Expenditure incurred in the last five years**— As the feeding programmes are arranged out of the production of the above three components and organised by the active participation of the local people themselves, no cash expenditure is incurred by the government for running the feeding programmes.
- c. **Number of people benefitted**— Child (days) ... 6,17,074
Woman (day) ... 98,856
- d. **Agencies and personnel** — The feeding programmes are run by the active participations of the people themselves through Mahila Samities, youth clubs and schools.
- e. **Achievements in that direction** — In general the results of the feeding programme have been satisfactory. It has to some extent been able to educate the community on the use of locally available nutritious food in the preparation of correctly planned meals and also the local people have been encouraged by their own efforts to increase the production of the necessary, foods for their own consumption. The main problem encountered is that the local contribution for in conducting the feeding programmes as not forthcoming when necessary,

Problem.

- f. **Provision made in the IV Plan** — As no cash expenditure on the part of the government is involved, no financial provision in the IV Plan has been made,

A provision of Rs. 15 lakhs has however, been made for the applied nutrition programme for financing the school gardens home gardens poultry units and fisheries.

Chapter XXV

MIDDAY MEAL SCHEME IN TAMILNADU.

Samuel Adik.

1. Pattern of Midday Meal scheme in Tamilnadu.

This Scheme practically covers all the 30, 663 Elementary schools in the state.

About $\frac{1}{3}$ the number of children are fed in each Revenue District. 18.2 lakhs of children (including Harijan Welfare School are fed for 200 days in a year.

However there is no hard and fast rule that $\frac{1}{3}$ the number of children in *each* school, OR *each* Range OR *each* Educational district should be fed.

There is Midday Meal Committee for each School with the Panchayat President as the Chairman and the Headmaster of the School, as the Secretary who are responsible for the selection of beneficiaries and collection of contribution.

2. Research Done in the field.

a) Research conducted by Sri. Avinashilingam Home Science College.

Research on the Nutritional effect on the children that are fed by the midday meal scheme and those not fed were carried out by the Sri Avinashilingam Home Science College Coimbatore, in 1967 on 110 children fed in elementary school run by them out of 240 children.

The children care fed on a nutritional and well-balanced diet and found that the children fed by them over a period of four years definitely gained in height and weight, red blood cell count, hemoglobin and general health, than the children not fed in the school.

They have suggested a nutritious, cheap balanced diet for the midday meal centres to provides more than one-third the daily requirement of a child in terms of calories, proteins, vitamins, calcium and other nutrients.

* Special Officer Midday Meals Programme, office of the Director of School Education, Madras.

b) Research conducted by CARE

Research on sweetened Balahar was done by CARE to find out its acceptability in 10 schools for 10 consecutive working days. The finding was that the food was found acceptable.

c) Research conducted by USAID

Another study was initiated in 1968, by USAID. The research was carried out in a number of schools situated in Poonamallee Panchayat Union area to measure the nutritional impact of P. L. 480 Programme. A group of 1,000 children fed with the assistance of CARE Commodities for a minimum period of 3 years' was taken and another group of 1,000 children not receiving the mid day meals was taken for comparative study for the following measurements :-

- i) Physical (including Physical endurance)
- ii) Clinical
- iii) Bio-chemical
- iv) Mental
- v) School Attendance.

Some of the findings of these investigations are

The increase in proteins was not appreciable, there were increases in calcium, vitamin A and Riboflavin contents of the diet.

There was no difference in the clinical status of the children fed school lunch and not fed school lunch. The same school lunch status was found in regard to psychological tests also.

This may be due to the fact that only the children belonging to the poorest socio-economic group were fed.

3. Health Education in the Midday Meals Scheme

The state Institute of Education, Madras, organised a number of Seminars for headmasters of elementary Schools and the Inspecting Officers. The Institute brought home to them the nutritional value of the greens and vegetables used in the midday meals. The project Nutrition Officer of the state Applied Nutrition Programme took an active part in the conduct of these meetings.

The Institute of Public Health in Poonamallee conducted a thorough study of the necessity for basic hygienic principles, standards and practices to be adopted in running the midday meal Scheme.

The Institute of Public Health, Poonamallee, performed a number of experiments and evolved numerous recipes to prepare wholesome nutritive food using wheat Rice C. S. M. and Oil. A very acceptable preparation from wheat, C. S. M. oil and Vegetables came out as Vegetable briyani. The catering Institute of Technology at Madras is being consulted on the quickest and economic method of cooking in the central kitchens preserving all the nutrients in the food.

4. Effect of Introduction of Midday Meal scheme on Enrolment in the Primary and Upper Primary Schools in Tamil Nadu

The Midday Meal Scheme in Tamilnadu was introduced in the year 1957. The next year itself the enrolment figures shot up from 28.8 lakhs to 31.6 lakhs. This extra-ordinary enrolment must necessarily be attributed to the introduction of midday meal scheme, as the enrolment in the following year (1959-60) is only 1.7 lakhs of additional pupils.

When the CARE programme was introduced in the year 1961, there was again a spurt in the enrolment figure from 31.7 lakhs in 1960-61 to 35.8 lakhs in 1961-62, i. e. a difference of 4.1 lakhs pupils. The impact of the introduction of CARE programme in the midday meal scheme seems to have more than a monetary effect, as during the next two years the additional enrolment figures was 3.2 lakhs and 2.97 lakhs respectively, whereas in the following year, i. e., 1964-65 onwards the increase was 1.76 and 1.23 lakhs.

5. Financial implications of the Midday Meal scheme run in Tamilnadu-Figures For 1968-69

Amount spent by government at 6 Paise per meal per pupil.	191.60 lakhs
Contribution by public and panchayat at the rate of 4 Paise per meal per pupil.	127.62 Lakhs

Total amount spent on midday meals by
the government and public

319.22 lakhs

This amount does not include the money spent by social Welfare Department on 1.3 lakhs on harijan pupils and by the Corporation of Madras on 33,000 pupils:

In 1968-69, the worth of CARE commodities received is

Rs. 310 lakhs

The amount spent by the government on CARE programme in 1968-69 i.e. (including administrative cost, transport and rent for CARE commodities, which works to 15% of the cost of CARE commodities)

Rs. 48.6 lakhs

The government do not spend any amount on transport or any other expenditure supplied by the Catholic Relief Society to 80,000 and Christian Association for social action for 30,000 pupils. Excluding all the beneficiaries who are supplied by other agencies than CARE; the commodities by CARE is supplied to 15.57 lakhs of pupils. Hence each midday meal supplied to the pupil is worth 20 paise each. The break up figures being 6 paise subsidised by government; 4 paise contributed by the public and panchayat, and 10 paise worth of commodity contributed by CARE and other organisations

6. Agencies Involved.

The following agencies supply foreign commodities to the midday scheme :

a) CARE, U. S. A.

b) Catholic Relief Society provides lunch for 80,000 children and provide commodity for running number of orphanages and other nutritionally vulnerable groups.

c) Christian Association for social action provide lunch to 30,000 pupils and supply commodities to number of orphanages and nutritionally vulnerable groups.

d) 317 high schools feed 28,800 children out of voluntary donation by the public.

- e) The departments and other organisations that correlate the work of midday meal scheme in Tamilnadu.

The Rural Development and Local Administration Department of the Government of Tamilnadu help the education department in the release of midday meal grants through the panchayat union commissioners.

The Project Nutrition Officer of the applied nutrition programme of the Government of Tamilnadu is consulted now and then with regard to the various points regarding the running of the programme.

The Institute of Public Health, Poonamallee has undertaken extensive research in the field of health habits sanitation, hygiene and the preparation of recipies for the midday meal scheme.

The Catering Institute of Technology is being consulted on the quickest method of economical cooking conserving the nutrients in the food.

- f) Agencies to which the education department stores CARE commodities, and releases them as and when required.

- 1) The Midday Meals Scheme of Pondicherry State.
- 2) Feeding of the wives and preschool children of the workers in 4 municipalities in the state.
- 3) Feeding programme for the wives and children] of the workers in industries (39) in Tamilnadu.
- 4) Feeding progromme to be introduced by Social Welfare Department in 'Kuzhandaigal Kappagam' (Balvadi) for pre school children.
- 5) Feeding programme to be introduced by the Health Department for pregnant and lactating women and their children through the Rural Health Centres.

- g) Central kitchens and regional godowns.

A central kitchen was started at Avadi as a pilot project in 1967. At the central kitchen, food is cooked by electricity, transferred into cans and delivered by motor vans to 53 schools in the Poonamallee Panchayat Union, feeding 2,600 children.

The overall cost of food prepared at the central kitchen works out to 10 paise per meal including the cost of electricity, petrol for the vans and their maintenance and establishment charges, but excluding the cost of CARE commodities. The staff employed for this purpose is a supervisor, two drivers, two cooks, one helper and one watchman.

As the Central Kitchen scheme has been found successful, CARE has come forward to set up 30 such kitchens at a cost of Rs. 2 lakhs each covering the entire Chingleput District, 3 in North Arcot Dt. and one in South Arcot Dt. Of these 30 Central Kitchens that are being constructed, kerosene will be used as fuel, as it is less expensive, easy to adjust heat, thereby enabling to reduce cooking time. Special insulated fixed type of stainless steel cooking pans allowing interspace for heat to reach around the sides are being designed. A store room, washing place and an office room are also provided.

1) Regional godowns

Recently the Government of Tamilnadu have accepted the proposal of the CARE organisation to build ten Regional godowns approximately one every 160 metres (100 miles) to cater to the needs of schools and future Central Kitchens within a radius of 80 Kms. or 50 miles. at a cost of about Rs. 3 lakhs per godown. The Tamilnadu Government have to provide necessary land, 10% of the cost of construction and the staff necessary for maintaining the godowns. This move is expected to substantially reduce the storage charges incurred at present at the Madras City godowns from Rs. 4 lakhs to about Rs. 1 lakh. The Regional godowns are likely to store at a time food commodities required for about 3 months for the region it is intended to serve. Sites have been selected to construct in six places in the state.

Chapter XXVI

FEEDING PROGRAMMES IN UTTAR PRADESH

• C. Govind

The applied nutrition programme in Uttar Pradesh was launched in the year 1963-64. In the beginning skim milk powder was supplied by UNICEF distributed among the pregnant and nursing mothers and toddlers by the mid wives at the maternity and child welfare centres in blocks with 29 applied nutrition programmes. In 1966-67 the agency for running the supplementary feeding programme was switched over to social welfare department. The revised feeding scheme was run through the mahila mandals in blocks with 31 applied nutrition programmes.

The objectives of supplementary feeding programme are as below:—

1. Making the community conscious of the special nutritional requirement of the vulnerable groups, namely preschool and school children, pregnant and nursing mothers and supporting it to develop its resources to the fullest extent towards increasing balanced food production with a view to use the surplus produce for feeding the vulnerable groups.
2. Strengthening the institutional base in the rural setup for gearing up production of balanced food.
3. Developing the mahila mandals and training their members in Applied Nutrition and defining their role in running the supplementary Feeding programme for pre-school children, pregnant and nursing mothers.

* Deputy Director, (W. W. N.) Agricultural Production and Rural Development.

4. Running the feeding programme for providing supplemental food for vulnerable groups and also as a demonstration in better nutrition.

Beneficiaries:

The Supplementary Feeding Programme with UNICEF skim milk powder was organised at 195 centres on an average per year (1966-67 to 68-69). The beneficiaries were the balwad children upto the age of 5 years, nursing mothers with children upto the age of 9 months, pregnant women from three months after conception upto the date of delivery and children under the age of three years accompanying such pregnant and nursing mothers.

Distributing Agency:

The mahila mandal is the milk distributing agency. It distributed milk in liquid form after preparing carefully and hygienically the supplementary food with the skim milk.

The Village Feeding Committee which was a part of the gram panchayat is responsible for collection of cereals, pulses, oil seeds, fruits, vegetables etc. for running the feeding programme. The gram panchayat is responsible for producing and procuring fish and eggs through its own efforts for the feeding programme.

Provision of funds for the construction of buildings for mahila mandals to facilitate nutrition education and distribution of supplementary food was made in each Applied Nutrition Programme block. These buildings known as Poshahar Griha (nutrition demonstration home) were constructed with the assistance of the panchayats concerned.

To make the feeding programme self-reliant and self-propelling the mahila mandals took up production programme eg. vegetable, beans and fruit growing in kitchen gardens and on land allotted to them by the panchayats.

Role and Responsibilities of different Functionaries for Milk Feeding Programme: —

Feeding Programme was built up from below. The grass-root village level women workers were closely linked with the programme run by the mahila mandal. Gram Sevika guided the mahila mandal in running the day to day feeding programme and maintained records according to standing instructions.

The concerned gram panchayat forms a village feeding Committee, with its members where the Pradhan of the Panchayat, is the Chairman of the Committee, President of the mahila mandal, is the gramsevika, headmistress of local Girl's School and Mid-wife if any, Gramasevak and one enthusiastic member of the panchayat, as members.

Supervision

On the spot guidance and supervision of supplementary feeding programme are the responsibility of the gramsevikas. She assists at least two mahila mandals under her charge in running supplementary feeding programme for the preschool age children and pregnant and nursing mothers. She guides the mahila mandals in using liquid milk made from the skim milk powder, in preparing supplementary food such as curd, raita, dalia, khir, khichri with milk, lassi etc.

The feeding Programme supervised by Assistant Development Officer (W) in the block. The Regional Assistant Directors (Women) supervise the work of A. D. O. (W) in the zone. They were guided by the Deputy Director (W), Social Welfare and Deputy Director (W. W. N.), Community Development from the State Head quarters. In 1967—'68 the posts of Regional Assistant Directors, 10 in all, were abolished along with the abolition of the welfare scheme in the State. Since 1968—'69, the contingent of women personnel in the Applied Nutrition Programme blocks has been revived. A Deputy Director (W. W.N.) guides the programme from state level.

Budget

To strengthen the demonstrational aspect of the Feeding Programme funds to the tune of Rs. 6,550/- per block were provided under C. D. Budget since 1964-65. The detailed break-up of the budget was as under

S. No.	Item	Yearly amount @ per A. N. P. Block	
		Rs.	P.
1.	Agricultural, Food & Nutrition Demonstration at the Gramasevika Centre and at the Mahila Mandal.	...	500-00
2.	Subsidy for the construction of Pucca Mahila Poshan Griha @ 66·2/3% of the total cost subject to a maximum of Rs. 2,000/- per mahila mandal.	...	2,000-00
3.	Subsidy to village women and mahila mandal, Yuwati mangal dal and Gram swayan sevika dal for starting kitchen gardens, nurseries, Community archards, fencing and meeting cost of transport of plants, Purchase of seeds and Plants and construction of Pucca compost pits @ 33·1/3% subject to a maximum of 50% in special cases.	...	50-00
4.	Transportation of chicks and fingerlings from outside, loading, unloading and transportation of UNICEF fertilizers etc.	...	100-00
5.	Purchase of sugar for feeding centres	...	200-00
6.	Prizes and awards for Women's competition in Nutrition, Production of protective food preservation and processing of food, best feeding centre and best community effort for improving nutritional standard	...	100-00
7.	Educational trips in connection with Applied Nutrition Programmes.	...	100-00

S. No.	Name	Yearly amount @ per A. N. P. Block
8.	Organisation of Nutrition Fair	... 100-00
9.	Kitchen garden accessories	... 100-00
10.	Purchases of cooking utensils like big vessels, buckets, tumblers, jug, mug, Katori, spoons, spatula, stove and kerosene oil for feeding centres, servicing and cooking.	... 350-00
11.	Setting up food utilisation industrial unit-one per block. Purchase of equipment and material.	... 750-00
12.	Financial assistance to mahila mandals for employment of technical and management staff for food utilisation industry units.	... 1,200-00
13.	Subsidy for the construction of work-shed to members of mahila mandal/Yuwati Mangal Dal @ 33.1/3% to 50% subject to a maximum of Rs. 1,000/-	... 1,000-00
Total		6,550-00

Since 1967-'68 the grant for construction of Poshan Griha has been withdrawn.

Progress

The progress of supplementary feeding programme in the UNICEF assisted skin milk is as under :-

	1966-'67	1967-'68	1968-'69
1. Beneficiaries			
a) Preschool children			
(Child days)	7233	15620	88797
b) Pregnant and Nursing Mothers (Women days)	2869	5586	37503
2. Amount of Skim Milk utilized (in kg.)	9209	57360	30980
3. Other foodstuffs contributed (in Kg.)	27970	27331	59881

UNICEF skim milk was made available for a duration of 2 years (viz.) 1966-'67 and 1967-'68. Therefore, since 1968-'69 efforts to run demonstration feeding are being made by the mahila mandals with the generosity and contribution made by the local community mahila mandals which tried to collect one quintal of foodstuff after rabi and karif harvesting, that is supplemented with vegetables grown in their kitchen gardens. The feeding programme during the interim period has been sporadic there fore. Attempts are now being made to make it a regular programme.

Suggestions for Improvement

1. In the initial, stages feeding programme should be given support by the government and international agencies like in CARE.
2. CARE policy of assistance of food comodities should be streamlined and a fairly uniform pattern evolved from centre to the state.
3. Central assistance given to associate organization for purchase of equipment should be diverted, to provide foodstuffs for demonstration feeding Programme and for construction and setting-up of model kitchen in the villages.
4. Supervisory women personnel should be strengthened at district and zonal levels.
5. Composite scheme for women and preschool children should be dove-tailed with the Applied Nutrition Programme. Five years A. N. P. could be followed by five years of demonstration feeding (composit programme component) to be finaly taken care of by the mahila mandals (nutrition education through mahila mandals to be renewed appropriately.

Fourth Plan

Feeding Programmes will be based on people's contribution and development of local resources for additional production of balanced food. Proposal to run the programme with CARE commodities are under active consideration of the State government.

